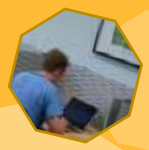

UCLA Classroom Advisory Committee

Report and Recommendations

September 2017

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INTRODUCTION

The Campus Space Committee (CSC) is an advisory body to the Executive Vice Chancellor and Provost. The principal roles of the CSC are to examine campus space issues and develop recommendations on how to best utilize facilities and spaces to meet UCLA's educational and research needs; and to review the campus Ten Year Capital Plan, updated annually by Capital Programs, to assess its reflection of academic priorities and fiscal resources.

In February 2016, Executive Vice Chancellor and Provost Scott L. Waugh convened a committee on the Undergraduate Student Facilities Resource Plan to provide recommendations to the CSC regarding the anticipated UCLA undergraduate student enrollment growth. The Committee's report, titled *Report from the Committee on the Undergraduate Student Facilities Resources Plan* was submitted to the CSC in June 2016 (included herewith as Appendix A). The report recommended the establishment of a formal, standing campus committee comprised of faculty, students, and administrators to study, review, and recommend efforts pertaining to campus learning spaces that will meet the needs of the expanding student population.

In November 2016, Executive Vice Chancellor and Provost Scott L. Waugh established the Classroom Advisory Committee (CAC) and charged its members to study, review, and recommend efforts on how to improve and increase existing classrooms and teaching laboratories, including both general assignment and non-general assignment/departmental instructional spaces (the charge letter is included as Appendix B.) Additionally, members were charged to consider emerging trends and practices in pedagogy and their implications for learning spaces to identify classroom characteristics that promote an effective and inclusive learning environment. This report summarizes the CAC's deliberations and recommendations.

The Provost's request comes at a time when UCLA is evaluating its instructional space and how new teaching and learning methodologies are being considered. As pedagogy evolves and perceptions of learning spaces change to meet the needs of the 21st Century, a unique opportunity exists for UCLA to forge ahead, setting new standards for the university and campus teaching and learning environments while increasing access to teaching and learning spaces.

EXECUTIVE SUMMARY

A core focus of the Classroom Advisory Committee (CAC) was to examine the current utilization of classroom and laboratory spaces to determine if the University has a sufficient inventory of learning spaces distributed across the campus. In addition to assessing the quantity of existing and required instructional spaces, CSC also considered the quality and types of different spaces, including more innovative classroom design and distance learning.

New developments in pedagogy emphasize the importance of interactive learning. Such learning may require different types of instructional spaces that deviate from the traditional classroom design. Pedagogical innovation is also supported by new and emerging technologies that could equip classrooms to both enhance teaching and learning experiences and increase the utilization of existing spaces.

Lastly, the committee noted that learning does not only happen in the classroom, and thus identified the additional need to examine opportunities for study spaces and non-traditional learning spaces, outside the classroom.

Major Findings

CAC examined data and information provided by a variety of sources, including a campus wide survey of departments regarding the utilization of instructional space as well as briefings from a variety of on- and off-campus authorities. Key findings include:

- The vast majority of classes have start times between 9:00 a.m. and 3:00 p.m.
- About 100 classrooms weekly do not host any courses prior to 9:00 a.m. and after 4:00 p.m. from Monday to Friday.
- Current GA classroom scheduling focuses on using any available GA room to meet academic department room requests, regardless of seat utilization metrics.
- GA rooms with station capacity of 60-99 are scheduled less often and have low utilization, indicating that rooms of this size are particularly underutilized.
- In Fall 2016, an average of 183 classes had a start time of 12:00 p.m. compared to 80 at 8:00 a.m., 103 at 4:00 p.m., and 26 at 5:00 p.m.
- In Fall 2016, GA rooms were scheduled 81% of the time from 8:00 a.m. to 6:00 p.m. and utilized an average 67% of the total available seats; however, while rooms with a station capacity of 60-99 were scheduled 85% of the time, they filled an average of 55% of the

available seats, indicating that there is a level of mismatch between actual class enrollments and assigned classroom capacity.

- Increased utilization of existing classrooms may be possible, if departments more accurately project class enrollment, and if classroom assignments are more closely aligned to the capacity of a room.

- In Fall 2016, on a weekly basis, 30% of GA classrooms accommodated more than 21 classes of standard meeting lengths; however, 10% accommodated fewer than 10 classes weekly.

- In general, GA classrooms seating fewer than 20 students are more underutilized than GA classrooms with higher station capacity.

- Some of the best-utilized classrooms are those seating 20-39 and 40-59 students.

- About half (47%) of NGA classrooms are utilized for fewer than 20 hours per week for instructional purposes; however, 28% are utilized more than 40 hours per week.

- Departments indicate that the greatest need is for more seminar spaces with station capacity of fewer than 60. This combined with the previous finding indicates that a possible conversion of some larger instructional spaces into smaller ones should be considered.

- Departments indicated that at times they use instructional space for non-instructional needs, but they also use non-instructional space as classrooms.

- Many departments currently share space informally with other departments or units.

- Almost 80% of the departments indicated willingness to share instructional spaces they control with other departments, under certain circumstances.

- The vast majority of instructional spaces at UCLA retain a traditional design structure (fixed seating in rows with a podium at front); however, active learning is better served by more innovative instructional spaces with flexible layouts that can readily adapt to different types of instructional needs.

- While classroom technology is rapidly changing, BruinCast has not yet adopted the newer technologies.

- There is a significant need on campus and in the area adjacent to campus, where a lot of students live, for more study spaces, especially for more creative and less traditional design.

- The Space Inventory Services database inaccurately and incompletely reflects how rooms are utilized. As learning spaces become more broadly defined as spaces with increased flexibility to routinely serve multiple purposes, this discrepancy will become more pronounced. It may become necessary for the University to create a new use code for these sorts of spaces. In the interim, the database could include a field to indicate if a room is ever used for instructional purposes related to undergraduate or graduate coursework toward degree completion.

- In Fall 2016, the UCLA Space Inventory System recorded 524 rooms with a total of 211,792 square feet designated for storage. As the average classroom is 819 square feet, the space currently assigned for storage is the equivalent of about 260 classrooms. Eliminating even half of the existing storage may help to alleviate the space crunch for departments and programs.

- Simultaneously scheduling classes in both 60-minute and 90-minute increments throughout the same day may result in greater underutilization.

- As departments may schedule classes that vary from the prescribed time-pattern for GA room assignments, accommodating department requests for GA rooms may not be possible as they potentially displace other on time-pattern requests.

The Committee's findings suggest that the time is right to devote funding and resources to developing new models for teaching and learning in the 21st Century and designing innovative, flexible learning and study spaces to meet the needs of an evolving pedagogy and increasing enrollment.

Conceptual rendering of planned renovations at Franz Hall

Recommendations

The Committee developed 31 recommendations under the following four general headings:

1. General capital project guidelines
2. Efficient utilization and scheduling of existing classroom space
3. Design for 21st century teaching and learning
4. Study spaces and non-traditional learning spaces

Several of the recommendations require a shift in current campus culture as it pertains to concepts of learning spaces and classroom utilization. Fortunately, this shift has already begun as departments adopt creative and flexible solutions to alleviate spaces issues. Many departments currently manage flexible spaces that serve several different functions to accommodate instructional and other needs. Additionally, many departments have forged relationships with partner departments and collaborate to share space to alleviate space issues.

With further explication to follow in this report, the CAC recommendations are as follows:

1. General capital project guidelines

    1a Identify donor opportunities to support student-centered learning spaces ranging from study areas to instructional spaces that offer new and more effective ways of teaching and learning.

    1b Develop and implement strategies to involve students and faculty more fully in generating design solutions for addressing space issues related to the campus educational experience. Such strategies might include a campus summit, design workshops, a website to facilitate ongoing feedback, and other ideas.

    1c Engage a design firm to support the strategic planning efforts related to creating new, innovative learning spaces.

    1d Assess the opportunity costs of remodeling existing space versus building new, more flexible spaces.

    1e Conduct a review of the existing arrangement with the Office of Instructional Development (OID) regarding assessing, planning, providing, and maintaining equipment and technologies in general assignment instructional and common area spaces.

2. Efficient utilization and scheduling of existing classroom space

   2a Maintain a historical record of each course's quarterly enrollment patterns, including room assignment, station capacity, enrollment analysis, and time patterns.

   2b Implement analytic software that integrates with the degree audit system, which would identify to academic departments the remaining courses that students need for on-time degree completion.

   2c Develop a methodology for use of the online scheduling platform to include all general assignment (GA) and non-general assignment (NGA) spaces suitable for instructional and auxiliary purposes, requiring departments to input room availability each quarter.

   2d Survey classrooms (GA and NGA) scheduled for instructional purposes fewer than 18 hours weekly and instructional laboratories scheduled fewer than 12 hours weekly to determine what physical, technical, or other modifications are appropriate to improve their utilization.

   2e Achieve a better temporal distribution of classroom use by enforcing UCLA Policy 870 pertaining to GA classrooms, specifically requiring that no more than 60% of classes are scheduled between 9:00 a.m. and 3:00 p.m. (prime time), and 20% of classes are scheduled on Fridays. Faculty should be encouraged to teach before 9:00 a.m., in the evenings, and on Fridays to enhance classroom use.

   2f Develop a monitoring system for departments requesting rooms that have capacity higher than 125% of their maximum enrollment over the last three years. Classes should be reviewed and departments may need to adjust enrollment capacities, merge sections, or perform other changes to increase utilization and or accept classroom assignments more closely aligned with registration numbers.

   2g Review current priority scheduling agreements to determine alignment with campus scheduling standards and adjust as needed.

   2h Preferential scheduling of classrooms should be limited to extenuating circumstances and when room furnishings and/or technology cannot be accommodated in a nearby building more closely sized to anticipated enrollment.

   2i As departments finalize course schedules, any unneeded GA classrooms must be released as soon as possible-no later than

one week prior to the first day of instruction—to provide sufficient time for adjustments to room assignments to be made.

2j Midterms should be offered during allocated class time; however, when instruction requires scheduling outside of class time, they must occur at days and times determined by the Registrar's Office to mitigate schedule conflicts and overlaps with other classes.

2k Create department cohorts and develop an incentive system for departmental classroom sharing.

2l Before departments convert NGA instructional space to other uses, they must demonstrate that any displaced classes can be accommodated into other departmental instructional rooms or confirm with the Registrar's Office that sufficient existing GA classroom space can accommodate the need.

2m State-supported academic programs should take priority in their requests for GA classrooms over all other programs and UCLA Extension.

2n Develop a process and framework to identify, prioritize, and recommend instructional spaces and laboratories (GA and NGA) in need of renovation, to inform planning for renovations that typically occur during the summer months.

2o Explore opportunities to add additional instructional spaces or buildings in the northeast and south central regions of campus.

2p Evaluate existing classrooms to realign room capacities with desired enrollment caps. The rooms in need of immediate evaluation are rooms with capacity of 60-99 seats and consistent enrollments under 50% capacity.

3. Design for 21st century teaching and learning

3a Develop model classroom designs that could be implemented across campus to support new teaching pedagogies. The Classroom Advisory Committee should evaluate how these classrooms are received and used by faculty and students.

3b Appoint a task force to work with the Office of Instructional Development (OID), Online Teaching and Learning Initiative (OTLI), Instructional Enhancement Initiative (IEI), faculty, and students, to investigate expanded pedagogical possibilities for lecture capture. This task force should build on initiatives already underway and recommend a set of standards.

3c Determine space needs to support online and blended courses.

4. Study spaces and non-traditional learning spaces

    4a All major renovations or new construction projects should incorporate communal spaces that allow for student interaction.

    4b Create an annual fund commitment of $2,000,000 that can be used for new or upgraded study and project spaces.

    4c Identify specific strategic buildings on campus with quality study space and make them available late into the evening. Fund enhanced custodial services to ensure a clean and inviting environment and ensure that travel to and from them is safe.

    4d Explore the possibility of a facility near the northwest Village that could be open late into the evening to serve students who live off-campus.

    4e Evaluate the current use of machine shops on campus to determine if consolidation, downsizing, or repurposing into maker spaces is possible.

    4f Prioritize use of Powell Library for studying and direct student programming.

    4g Ensure adequate informal study spaces by making minor improvements (including furniture) in common areas of existing buildings as well as in outdoor spaces.

Further discussion of each recommendation, including rationale and suggestions for implementation follow in this report under the heading *Recommendations*.

The Study at Hedrick

A 24-hour study space with artisanal bakery and a variety of setups including private study carrels, quiet reading rooms, and discussion rooms wired with state-of-the-art technology and writable wall surfaces.

PROCESS AND DELIBERATIONS

The Classroom Advisory Committee (CAC) convened monthly from December 2016 to June 2017. Initially, the Committee received briefings about existing room and course scheduling policies and procedures that pertain to its charge. Then committee members formed three working groups to explore the areas under review and formulate recommendations.

In the course of its work, the Committee developed a survey to assess the utilization of non-general assignment/departmental spaces and to better understand departmental instructional space needs. Additionally, some committee members toured existing classrooms (renovated and not renovated); met with staff, faculty, and students to further inform their understanding of departmental needs, evolving pedagogy, and non-traditional learning spaces; and had a virtual tour of the Learning Innovation Center (LINC), a state of the art learning facility recently developed by Oregon State University.

Briefings

The CAC received briefings regarding the following:

Remarks from Executive Vice Chancellor and Provost Scott Waugh
EVC Waugh indicated that the campus must find solutions to alleviate the space crisis it will face over the next five years due to increased enrollment and changing instructional needs. The campus should adopt a rational approach that includes both improvement of existing spaces and addition of new instructional spaces. Additionally, it is important to consider the quality and type of classroom space needed. As pedagogy is evolving, further emphasizing interactive learning, the traditional lecture spaces may soon become obsolete. In consultation with students and faculty, we need to design spaces that incorporate technology and provide non-traditional seating to facilitate better learning and faculty-student interactions. Although funds are set aside annually for upgrading existing classrooms, it is important to also consider what new spaces are necessary. We should first think about what is practical and necessary, and then feasibility and funding should be examined.

Office of the Registrar
UCLA Policy 870: General Assignment Classroom Scheduling (included as Appendix C) sets forth the criteria that the Registrar's Office uses to maximize the assignment of all requested class offerings in general assignment (GA) classrooms. Each fall, winter and spring quarter, classes from the previous year are replicated. This creates the baseline for academic departments to make adjustments to their class schedule based on student and faculty course needs and preferences. Some academic departments have priority for specific room assignments and are allowed to schedule classes in those rooms prior to opening the rooms to general use.

Primary sections[1] are assigned rooms first. Room assignments are based on the enrollment cap of the class, which is set by the department. Then secondary subsections[2] are scheduled. In Fall 2016, about ten percent (10%) of the scheduled class sections could not be provided a room assignment immediately due to conflicting requests for space[3]. The problem is compounded as departments add classes after the initial room assignment has occurred, and departments make requests for classes they are unable to accommodate in NGA spaces. UCLA Extension books classes in rooms greater than 100 seat capacity after everyone else and only after 6:00 p.m. Additionally, the Registrar's Office receives about 1200 requests per quarter for special events, such as TA office hours, review sessions and midterm examinations. Campus Events schedules other events in GA rooms after the second week of the quarter.

The primary goal is to balance room capacity, enrollment caps, and the instructional needs of the department. After initial placement of classes, the Registrar's Office works in tandem with departments to switch classes into more appropriate rooms as enrollment projections change. In rare circumstances, the Registrar's Office allows certain class sections to set an enrollment cap greater than the capacity of the room, when the department can demonstrate a level of attrition within the first two weeks of the term. Also, to maximize GA room use, the Registrar's practice has been to accommodate requests if a room of sufficient size is available, potentially at the detriment to room utilization metrics.

Departments are responsible for managing, maintaining and scheduling their allocated non-general assignment (NGA) classrooms. When NGA space is unavailable, a department may request a GA room from the Registrar's Office. Currently there is no policy in place directing departments as to scheduling requirements for NGA rooms; consequently, NGA rooms and GA rooms may be scheduled using different time patterns. As the standard time blocks outlined in UCLA Policy 870 do not apply to the use of NGA rooms, accommodating departmental requests for GA rooms can present a challenge as integrating off-pattern classes into the GA room schedule is problematic and potentially reduces the maximum possible utilization of the GA rooms. Additionally, departments are not required to report all classes scheduled in NGA rooms to the Registrar's Office; consequently, the record of these classes and NGA room usage is incomplete.

Enrollment Demand and Classroom Usage

About five years ago, New Student and Transition Programs developed a system in collaboration with the academic departments, Admissions, and the Registrar's Office to meet enrollment demand and ensure that incoming students are able to enroll in courses that make progress toward their degree. Prior to this system, seats in courses tended to be full by the time new students were able to enroll.

In order to make appropriate projections for the year, for both entering first-year and transfer students, annual projections are provided to the academic

[1]The primary section is the main section of a course in which students must enroll and usually where credit value is assigned

[2]Secondary subsections are additional class sessions in support of a primary section

[3]Recent implementation of new schedule optimizer software has reduced the number of class sections that cannot be provided a room assignment immediately to about five percent (5%).

departments to assist with course planning. As part of that process, an annual analysis of course demand and usage is conducted. The process includes taking a snapshot each quarter of student enrollment in week 1 and week 3 to look at patterns of enrollment. Enrollment in some classes has higher attrition than others, and some departments are aware of this so they set high enrollment caps, knowing that actual enrollment will fall to meet initial targets for course enrollment. Additionally, student enrollment trends must take into account that many students enroll in a higher number of courses at the beginning of the quarter than they ultimately keep; some students essentially shop for courses of interest. In general, by the time course enrollment settles, it is too late to make classroom assignment changes. Therefore, projections of usage and demand are the only way in which to examine and change classroom assignment behavior.

BruinCast

BruinCast is a lecture capture system used on campus. The Office of Instructional Development (OID) provides this service, which is partially funded by student fees through the Instructional Enhancement Initiative (IEI). Three large lecture halls are currently fully equipped for video streaming/audio podcasting through BruinCast. Over 60 rooms are currently configured for audio podcasting. Departments may request, for a fee, additional video or audio services from OID to facilitate lecture capture in other rooms. Although the technology of lecture capture has changed significantly since BruinCast was launched in 2005-2006, BruinCast has not yet adopted some of the newer technologies. For example, classes are not live-streamed but captured on video and prepared for web use several hours later. Inadequate funding for newer technology and staff support means that late afternoon classes are not ready for student use until the following morning. Student enthusiasm for BruinCast seems high based on informal conversations and a poll conducted each quarter to assess student attitudes, which however has a very low-response rate. A systematic review of BruinCast should take place with an eye toward new technologies and possibilities.

WAZO

The WAZO project includes a group of UCLA students who form teams to explore solutions to a variety of issues. One such issue included a collaborative proposal with the student organization 3D4E and the Office of Instructional Development (OID) to build an outdoor study space on top of the South Campus Student Center (aka the bomb shelter). CAC believes that it is very important to consider student needs and ideas regarding solutions to space issues. Therefore, WAZO's exercise in design thinking, with students walking through the process and considering what a study space could be, may be an interesting model to consider.

Tours of Instructional Spaces

The Office of Instructional Development provided guided tours of instructional spaces at Bunche Hall and Dodd Hall to Committee members. The tours highlighted the types of challenges presented by older spaces within the confines of an existing building structure compared to recently remodeled rooms with moveable furniture that provide more flexibility.

Oregon State University
A representative from each CAC working group participated in a meeting with the Academic Technology team from Oregon State University who provided a presentation via video conference, included as Appendix D, regarding the design process for their new Learning Innovation Center (LINC). The project's objective was to design learning spaces that enhance learning and engagement while accommodating growth in student population. LINC was the result of the combined efforts of staff, faculty, and students who met informally to ponder and craft design solutions and test mock learning spaces in a variety of configurations. The end result is a building that contains laboratory learning spaces at the central core of each floor in a variety of configurations (e.g. small group clusters, parliamentary, arena, in-the-round). Teaching and learning spaces at the center of the facility encourage active learning and enhanced interactions (e.g. faculty-student, student-faculty, student-student, etc.). Around the perimeter of each floor, informal learning areas loop around the central cluster of learning spaces. The facility also includes office space for on-site technological and pedagogical support for faculty who utilize the teaching spaces.

Working Groups

The briefings to the full Committee helped to provide a common context and understanding of existing systems, policies, and procedures from which the Committee's charge could be explored. Although the issues under review are interrelated, the Committee formed three discrete working groups to explore its charge based on the following tasks:

- Conduct Inventory, Assess Needs and Evaluate Scheduling
- Consider Classroom Design for 21st Century Teaching and Learning
- Consider Study Spaces and Non-traditional Learning Spaces

The working groups provided periodic updates to the full Committee membership.

Conduct Inventory, Assess Needs and Evaluate Scheduling
In consultation with the full Committee, a questionnaire, the *Classroom and Instructional Space Survey* (included as Appendix E), was developed to collect information regarding non-general assignment classrooms and instructional spaces utilized in Fall Quarter 2016 as well as current and projected departmental needs. The online survey was distributed in January 2017 via BruinPost email to Management Services Officers, Student Affairs Officers, and other delegated representatives from all academic and non-academic campus departments gleaned from contact lists provided by Campus Human Resources, Facility Management, the College of Letters and Science, as well as the UCLA website and Campus Directory. A total of 183 departments, programs, and other units responded to the Committee's request for information: 84 departments indicated that they manage instructional space and completed the survey; 99 departments indicated that they do not manage instructional space but 24 of them completed portions of the survey. Analysis of survey findings as well as the information received from the aforementioned briefings led to the development of recommendations 2a-2o. (A

summary of survey responses and data is included as Appendix O and individual department responses as Appendix P.)

Consider Classroom Design for 21st Century Teaching and Learning
While renovated large classrooms at UCLA tend to retain a traditional structure with auditorium seating in tiers, it will be important to consider how pedagogical considerations, including making courses more interactive, will shape new design configurations. To this end, the 21st Century Teaching & Learning working group examined issues of pedagogy and space, investigating innovative spaces at Stanford University; University of Minnesota; Oregon State University; Indiana University; University of Maryland; and the Sorbonne in Paris, France (see Appendix F). Additionally, *Make Space: How to Set the Stage for Creative Collaboration* (2012), a book that describes how Stanford University designed the Hasso Plattner Institute of Design, and information provided at www.Stanford2025 informed the group's thinking. Additionally, the group engaged with faculty and students and toured study, production, and maker spaces at the UCLA Residence Hall facilities. Drawing from these sources led to the development of recommendations 3a-3c.

Consider Study and Non-traditional Learning Spaces
Building renovations may provide an opportunity to experiment with new configurations of teaching and learning spaces, including flexible furniture to allow for multiple configurations within a single space to serve both instructional and study purposes. Currently, an architecture team is conducting a study to better understand how to invigorate and utilize existing auxiliary spaces to quickly alleviate study space issues. Underutilized spaces (e.g. empty offices, corridors outside classrooms) can potentially be reconfigured without the expense of remodeling. Additionally, if campus departments were to dispose of surplus furniture and equipment being stored in campus buildings, additional space may be available for non-traditional learning and study spaces.

The Study Spaces and Non-traditional Learning Spaces working group explored existing spaces with the potential for renovation, as well as the possibility of constructing new space. Current campus construction projects, including the LaKretz Garden Pavilion and Franz Hall, provide an example of how a design concept develops over time, and how key a design team's engagement with users of the space is to its success (see Appendix G). Recommendations 4a-4g are CAC's suggestions for the creation of study and non-traditional learning spaces.

ROOM INVENTORY AND UTILIZATION DATA

CAC collected data from multiple sources to inform its discussion of space issues, including historical data for the Fall 2016 quarter from the Registrar's Office, Office of Academic Planning and Budget, Office of Instructional Development (OID), New Student and Transition Programs, and the UCLA Space Inventory System. Additionally, departments were invited to complete an online survey regarding non-general assignment/departmental spaces used for instructional purposes in Fall 2016 as well as current and anticipated needs. All data was compiled in a database so that it could be cross-referenced and cross-checked across the multiple sources. Although the CAC referred to data to influence certain recommendations, it did not rely solely on the data conclusions since the data sources did not cleanly reconcile. It should also be noted that classroom usage and utilization varies each term.

La Kretz Garden Pavilion

Space Inventory Database

The division of Space Inventory Services within UCLA Facilities Management maintains a comprehensive database of space occupied by departments and programs. This data represents UCLA's official space inventory and is reported to the University of California Office of the President (UCOP) annually.

Campus departments are instructed to review data and report any changes in assignment of space, occupant, or room use each fall. Current UCOP reporting requirements allow for the designation of one use code per space so departments assign the code that best describes the primary purpose of each space; consequently, the number of rooms used for instruction may be underreported.

In Fall 2016, 463 general (GA) and non-general assignment (NGA) classrooms and laboratories were designated with use codes specifying instructional purposes (Table 1).

Table 1: Number, Type and Capacity of Instructional Spaces

Use Code	Room Type	Station Capacity	Total Rooms
110	Classroom	10-19	5
		20-39	69
		40-59	68
		60-99	43
		100-149	22
		150-199	8
		200-299	6
		300+	7
130	Seminar	10-19	41
		20-39	62
260	Class Lab	10-19	17
		20-39	41
261	Special Class Lab	10-19	46
		20-39	21
		40-59	5
		60-99	0
		100-149	2
		150-199	1
			463

Additionally, 235 spaces, generally associated with the UCLA library, were designated with use codes indicating use for study (Table 2).

Table 2: Number, Type and Capacity of Study Spaces

Use Code	Room Type	Station Capacity	Total Rooms
410	Study Room	Not Stated	54
		1-9	117
		10-19	4
		20-39	5
		40-59	4
		60-99	6
		100-149	2
430	Open Stack/Study	Not Stated	17
		1-9	7
		10-19	7
		20-39	2
		40-59	2
		60-99	4
		100-149	1
		150-199	0
		200-299	3
			235

Notably, in Fall 2016, the UCLA Space Inventory System recorded 524 rooms with a total of 211,792 square feet designated for storage. There are eight rooms on central campus dedicated to storage with a total area of more than 600 square feet (Table 3).

Table 3: Storage Rooms on Central Campus with 600+ Square Feet

Building	Room	Square Feet
CNSI	5324A	1,040
HAINES HALL	B11	930
HAINES HALL	B26B	1,225
KAUFMAN	B060	7,624
MATH SCIENCE	2000M	1,500
MATH SCIENCE	4201	713
PHYS ASTRO	1704B	675
POWELL LIB	330	783

For the purposes of the CAC's study, room data from the Space Inventory Services database was compared to data collected from the Registrar's Office and to data provided by departments through the CAC online survey regarding classroom and instructional spaces.

General Assignment Classrooms

The Registrar's Office manages 192 general assignment (GA) classrooms (a list of GA classrooms is included as Appendix H). Approximately 64% of the rooms in the GA classroom inventory are rooms with station capacity between 20 and 60 (Table 4).

Table 4: Total GA Rooms by Station Capacity

Station Capacity	Total Rooms
10-19	13
20-39	83
40-59	39
60-99	21
100-149	17
150-199	6
200-299	6
300+	7
	192

The Registrar's Office routinely compiles data regarding the use of GA rooms (data from Fall 2016 is included herewith as Appendix I). In Fall 2016, each GA classroom accommodated from 2 to 35 classes, ranging from 50 minutes to three hours in length, with an average of about 17 classes per room (Table 5).

Table 5: Total GA Rooms by Class Count

Class Count	Total Rooms
1-10	19
11-20	115
21-30	55
31+	3

There are 19 classrooms that host a total of ten or fewer classes per week (Table 6).

Table 6: GA Rooms with Fewer than 10 Classes per Week

Building	Room	Station Capacity
Boelter Hall	5514	13
Bunche Hall	1265	16
Bunche Hall	2121	16
Bunche Hall	2150	16
Bunche Hall	2173	16
Bunche Hall	2174	16
Dodd Hall	175	98
Fowler Museum	A139	101
Haines Hall	A18	141
Haines Hall	A78	16
Humanities	135	115
Humanities	A30	16
Kaufman	136	12
Public Affairs	1246	103
Public Affairs	2292	16
Rolfe Hall	3115	16
Rolfe Hall	3120	16
Royce Hall	190	120
Royce Hall	362	131

Overall, the rooms scheduled with the fewest classes are rooms with seating capacities of fewer than 20, while rooms with capacities between 20–59 schedule the most class sections, including discussion sections which are 50 minutes in length thus allowing more to be scheduled during any given day (Table 7).

Table 7: Average Class Counts in GA Rooms by Station Capacity

Station Capacity	Average Class Count
10-19	6.23
20-39	19.82
40-59	19.80
60-99	15.85
100-149	11.12
150-199	12.33
200-299	14.17
300+	13.71

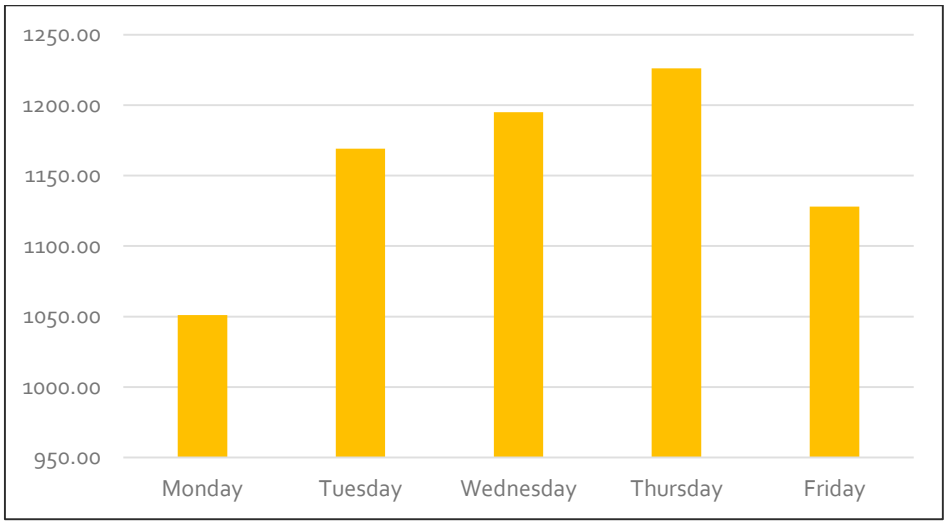
The Registrar also tracks the number of classes offered daily from Monday to Friday with start times on the hour from before 8:00 a.m. to 6:00 p.m. and later (see Appendix J). In Fall 2016, the Registrar's Office scheduled 5,769 class meetings weekly (Table 8).

Table 8: Class Count by Day and Time in GA Rooms

Start time	Monday	Tuesday	Wednesday	Thursday	Friday	TOTAL
before 8am	0	1	0	0	1	**2**
8:00 AM	60	110	76	95	60	**401**
9:00 AM	107	163	133	162	156	**721**
10:00 AM	137	97	148	105	172	**659**
11:00 AM	109	138	108	141	148	**644**
12:00 PM	185	180	191	181	182	**919**
1:00 PM	65	70	73	69	136	**413**
2:00 PM	169	181	185	188	162	**885**
3:00 PM	93	90	91	90	58	**422**
4:00 PM	104	96	138	123	52	**513**
5:00 PM	12	30	37	52	1	**132**
6:00 PM and later	10	13	15	20	0	**58**
TOTAL	**1051**	**1169**	**1195**	**1226**	**1128**	**5769**

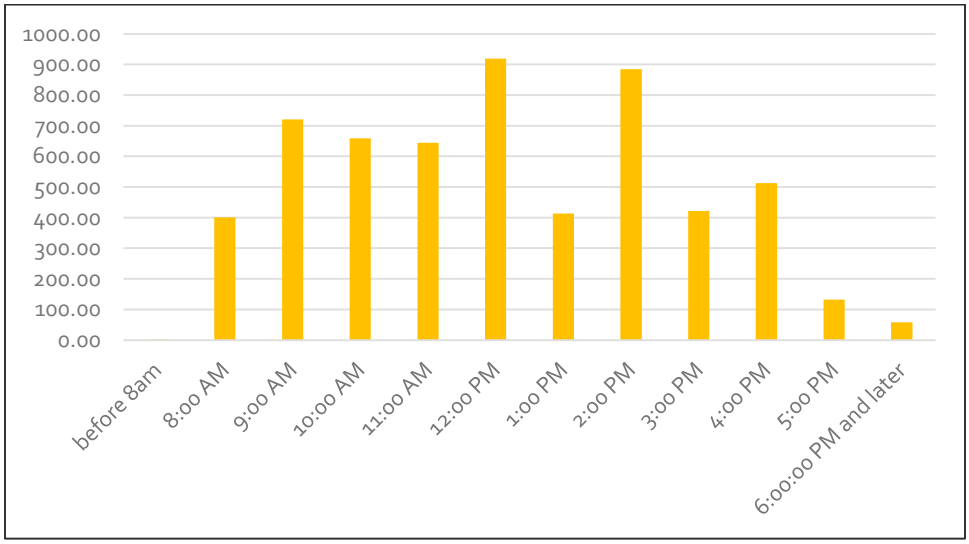
The largest number of class meetings are scheduled on Thursdays (21%) and the fewest on Mondays (18%) and Fridays (19.5%) (Figure 1).

Figure 1: Class Meeting Count in GA Rooms by Day



UCLA Policy 870 requires that no more than 60% of class meetings be scheduled during prime time (9:00 a.m. to 3:00 p.m.); however, approximately 80% of classes are scheduled between 9:00 a.m. to 3:00 p.m. (Figure 2). Notably, most classes during prime time are scheduled with start times of 12:00 and 2:00 p.m. Considerably fewer classes begin at 1:00 p.m. and 3:00 p.m. due to classes scheduled on non-standard time blocks of 120-minutes (e.g. a 120-minute class with a start time of 12:00 ends at 2:00).

Figure 2: Class Count of GA Rooms by Start Time



The Registrar's Office also maintains course enrollment data. In Fall 2016, the majority of classes scheduled in GA classrooms filled 51-65% of the total seats available (Table 9).

Table 9: Total Number of GA Rooms by Percentage of Available Seats Filled

Percent Seats Filled	Total Rooms
≤ 50%	10
51-65%	81
66-75%	53
≥ 76%	48
	192

As shown in Table 9, there were ten GA rooms with average enrollments of fewer than 50% of the available seats (Table 10).

Table 10: GA Rooms with Average Enrollment Less than 50% of Station Capacity

Building	Room	Station Capacity
Dodd Hall	146	81
Dodd Hall	175	98
Geology	3656	86
Haines Hall	A25	68
Kaufman	101	54
Knudsen Hall	1240B	117
Pub Affairs	1222	98
Pub Affairs	1329	32
Young Hall	2200	84
Young Hall	4216	61

Based on average enrollments across GA classrooms of all sizes, about 67% of the total available seats were filled in Fall 2016 (Table 11).

Table 11: Average Percentage of Seats Filled in GA Rooms by Station Capacity

Station Capacity	Average Percentage of Seats Filled
10-19	67%
20-39	72%
40-59	64%
60-99	55%
100-149	62%
150-199	75%
200-299	69%
300+	71%

By station capacity, the least utilized rooms were those with a capacity of 60-99, which filled approximately 55% of the available seats–12 points below the overall 67% average. Table 9 shows the 20 least utilized GA rooms of this size (Table 12).

Table 12: Most Underutilized GA Rooms with Station Capacity of 60-99

Building	Room	Station Capacity
Boelter Hall	2444	80
Boelter Hall	2760	71
Boelter Hall	5249	92
Boelter Hall	5440	65
Botany	325	79
Broad Center	2100A	83
Dodd Hall	146	81
Dodd Hall	170	63
Dodd Hall	175	98
Franz Hall	2258A	82

Building	Room	Station Capacity
Geology	3656	86
Haines Hall	A25	68
Phys Astro	1434A	95
Public Affairs	1222	98
Public Affairs	1234	98
Public Affairs	2214	89
Public Affairs	2250	60
Public Affairs	2270	78
Young Hall	2200	84
Young Hall	4216	61

General Assignment Classroom Technology

The Office of Instructional Development (OID) supports the University's mission by providing equipment delivery, technical assistance, and training to support and enhance teaching and learning in general assignment (GA) classrooms. OID plans, designs, installs, and upgrades instructional technology in classrooms, seminar rooms, conference rooms, and other spaces on campus. Additionally, OID provides BruinCast, the campus webcasting service.

In Fall 2016, OID updated its inventory of the technologies available in general assignment classrooms (Appendix M). OID also maintains an online database with specific information about each GA room, including an image of the space, installed equipment, and links to useful training guides (Appendix N). OID strives to equip each room with current technologies that support innovative teaching methodologies (see Table 13).

Table 13: GA Room Count by Available Technology

Technology	Description	Total GA Rooms
Network	Ethernet jacks available	192
WiFi	Wireless internet connection	192
DVD	DVD Format Video	192
Video Display	Projector for Media	192
VHS	VHS Format Video	180
Voice Amplification	Wireless Microphone Frequencies	169
PC	Computer	159
Overhead Projector	Tabletop projector with transparencies	84
Podcast	Audio recordings of classes	70
HDMI	Inputs for computers using HD cables	51
Document Camera	Newer version of an overhead projector	26
Blu-ray	HD Format Video	22
35 mm	35mm Format Player	12
Streaming	BruinCast Hardware	11
Multiple Projection	Multiple systems used simultaneously	11

OID does not maintain an inventory of non-general assignment/departmental classrooms.

Classroom and Instructional Lab Utilization in Fall 2016

The Office of Academic Planning and Budget (APB) collects data from the Registrar's Office to calculate room utilization rates. For Fall 2016, APB collected data for 641 general assignment (GA) and non-general assignment (NGA) rooms (APB data is included as Appendix K and a summary of data as Appendix L). Per the UCLA Space Inventory System, the rooms are categorized as follows (Table 14).

Table 14: GA and NGA Rooms Used for Instruction in Fall 2016 by Room Type

Room Type	Total Rooms
Classroom	260
Lab	163
Other	154
Unspecified	64
	641

APB data includes 310 of the 519 NGA rooms used for instructional purposes as reported by departments through the CAC Classroom and Instructional Space Survey for Fall 2016 (Table 15).

Table 15: Total NGA Rooms Included in APB Data by Room Type

Room Type	Included in APB Data	Excluded from APB Data
Classrooms	95	7
Labs	128	55
Other	71	96
Unspecified	16	51
	310	**209**

In 1970, California adopted Assembly Concurrent Resolution 151, establishing the standard that a room should be scheduled, on average, 75% of the 70 hours that fall between 8 a.m. and 10 p.m., Monday through Friday; i.e. 52.5 hours per week. During those scheduled hours, two-thirds (66.7%) of the stations should be occupied. Combining room availability with occupancy, 66.7% of 52.5 hours, the standard is 35 weekly student contact hours per station. In 1990, UC adopted the standards proposed in the CPEC report, Capacity for Learning, which reflects a classroom utilization standard of 35 hours (CPEC).

With regard to utilization during the 10 available hours from 8:00 a.m. to 6:00 p.m., Monday through Friday, each classroom should be scheduled a total of 37.5 hours weekly.

The CPEC standards for instructional labs are based on a lab being scheduled 45 hours per week between 8:00 a.m. and 5:00p.m., Monday through Friday, with 23.4 weekly student contact hours for lower division and 17.6 weekly for upper division courses.

Per APB data, about 59% of classrooms and labs used for instruction in Fall 2016 were underutilized per the CPEC Standards (Table 16).

Table 16: Utilization of Classrooms and Instructional Labs in Fall 2016

Room Type	CPEC Standard	Total Rooms	Total Rooms Below Standard	Total Rooms 50% Below Standard
Classroom	37.5 hours per week	260	136[a]	47[b]
Lab	23.4 hours per week	163	114[c]	68[d]

[a]87 (64%) are non-general assignment/department (NGA)
[b]42 (89%) are NGA
[c]88 (77%) are NGA
[d]48 (71%) are NGA.

While almost 70% of the rooms that were scheduled fewer hours per week than the CPEC standard were non-general assignment (NGA) rooms, it is worth noting that APB collects data from the Registrar's Office and, consequently, does not include classes where the location is not formally reported to the Registrar's Office. Additionally, 154 non-instructional spaces were used for instructional purposes in Fall 2016 of which 71 (46%) were NGA spaces for a total of 792 scheduled hours.

As reported in the CAC Classroom and Instructional Space survey, the 209 NGA rooms not included in the APB data are scheduled weekly as follows (Table 17).

Table 17: Total Weekly Instructional Hours for NGA Rooms Unreported to APB by Room Type

	Not Stated	<6	6-10	11-15	16-20	21-25	26-30	31-35	36-40	>40	TOTAL
Classroom	0	0	0	0	3	0	3	0	0	1	7
Lab	2	3	5	2	1	3	6	1	5	27	55
Other	4	17	21	2	11	1	20	1	1	19	97
Unspecified	4	7	12	4	2	2	2	0	1	16	50
	10	**27**	**38**	**8**	**17**	**6**	**31**	**2**	**7**	**63**	**209**

As to station occupancy, the CPEC standard states that two-thirds (66.7%) of the stations should be occupied for any room in which a class is scheduled. In Fall 2016, the average enrollment per class in 95 (49%) of the general assignment (GA) classrooms was fewer than 66.7% of the total available scheduled stations. Additionally, classes in 10 (5%) GA rooms filled 50% or fewer of the total available stations (see Table 10).

New Student Enrollment Demand and Classroom Usage

The office of New Student and Transition Programs (NSTP) routinely collects data for courses open to new and transfer students. In Fall 2016, NSTP collected enrollment data for 162 courses, recording the room assignment, initial enrollment cap, and actual enrollment on the first day of the quarter (Appendix O).

As seen below, 12 class sections set initial enrollment caps that would fill only 50% of the available seats based on station capacity (Table 18).

Table 18: Enrollment Cap versus Station Capacity for Courses Open to NSTP

Course Number	Section	Enrollment Cap	Building	Room	Station Capacity	Percent of Stations Occupied
0194A	2	25	Boelter Hall	2444	80	31
94	1	0	Boelter Hall	5436	51	0
3	1	120	Broad Art Center	2160E	406	30
10	1	150	Dodd Hall	147	366	41
1	1	35	Franz Hall	1178	293	12
139	2	150	Haines Hall	A39	371	40
130	1	45	Knudsen Hall	1240B	117	38
0146C	1	150	NW Auditorium	101A	350	43
0184B	1	40	Pub Affairs	1234	98	41
19	2	20	Pub Affairs	2238	47	42
0191A	1	20	Pub Affairs	2343	60	33
0153C	1	100	Young Hall	CS76	229	44

By day one, 31 classes filled fewer than 50% of the available seats (Table 19).

Table 19: Day 1 Enrollment versus Station Capacity for Courses Open to NSTP

Course Number	Section	Enrolled Day 1	Building	Room	Station Capacity	Percent of Station Capacity Occupied
0194A	2	12	Boelter Hall	2444	80	15
3	1	154	Broad Art Center	2160E	406	38
105	1	42	Bunche Hall	1221B	100	42
0004W	7	18	Bunche Hall	3153	37	49
161	1	17	Dodd Hall	175	98	17
118	2	29	Fowler Museum	139	110	26
0114A	1	116	Fowler Museum	A103B	320	36
0127B	2	131	Fowler Museum	A103B	320	41
112	1	33	Franz Hall	2258A	82	40
110P	1	49	Haines Hall	A02	101	49
19	1	0	Haines Hall	A06	20	0
10	1	120	Haines Hall	A39	371	32
139	2	140	Haines Hall	A39	371	38
9D	1	49	Haines Hall	220	144	34
130	1	44	Knudsen Hall	1240B	117	38
19	1	6	Law	A122	32	19
0170A	7	16	Math Science	5117	40	40
0151A	4	12	Math Science	5118	38	32
0146C	1	70	NW Auditorium	101A	350	20
0164L	1	66	Perloff Hall	1102	148	45
0091C	1	39	Public Affairs	1222	98	40
1	1	45	Public Affairs	1222	98	46
19	2	20	Public Affairs	2238	47	43
0191A	1	19	Public Affairs	2343	60	32
177	1	20	Royce Hall	154	48	42
0090B	1	25	Royce Hall	156	52	49
0100A	1	18	Royce Hall	162	45	40
0014A	4	0	Young Hall	CS50A	352	0
0153C	1	56	Young Hall	CS76	229	24
0020L	1	79	Young Hall	CS76	229	34
17	1	110	Young Hall	CS76	229	49

Three rooms appear repeatedly on this list, indicating they host multiple courses that ultimately enroll fewer than 50% of the total seats available (Table 20).

Table 20: Most Underutilized GA Rooms for Courses Open to New and Transition Students

Building	Room	Total Courses <50% Capacity
Fowler Museum	A103B	2
Haines Hall	A39	2
Young Hall	CS76	3

Notably, if students initially enroll in more units than they anticipate keeping –essentially shopping for courses–they hold seats, which may ultimately become and remain open. Consequently, although a room assignment may be appropriate based upon the initial, projected enrollment cap or day one actual enrollment, the room may become underutilized after the drop-add period. In this case, it is too late in the process to make adjustments to room assignments.

CAC Classroom and Instructional Space Survey

In January 2016, CAC administered a survey regarding non-general assignment classrooms and instructional spaces utilized in Fall Quarter 2016 (see Appendix E: Survey Questions, Appendix P: Survey Summary, and Appendix Q: Survey Responses by Department).

Survey respondents indicated that 452 non-general assignment (NGA) rooms were used for instruction in Fall 2016 (Tables 21 and 22).

Table 21: Total NGA Rooms by Room Type

Room Type	Total Rooms
Auditorium	25
Lecture	64
Seminar	190
Instructional Dry Lab	40
Instructional Wet Lab	33
Computer Lab	38
Design Studio	6
Performance/Art Studio	26
Other	30
	452

Table 22: Total NGA Rooms by Station Capacity

Station Capacity	Total Rooms
< 20	160
20-39	160
40-59	48
60-99	51
100-149	12
150-199	6
200-299	3
> 300	6
Unspecified	6
	452

Survey respondents who included the number of hours each room is scheduled per week indicated that 47% of the rooms are used fewer than 20 hours weekly, while approximately 28% are used greater than 40 hours weekly for instructional purposes (Table 23).

Table 23: Total Rooms by Weekly Use of NGA Rooms

Hours Weekly	Total Rooms
< 6	40
6-10	77
11-15	49
16-20	52
21-25	29
26-30	51
31-35	21
36-40	22
> 40	128

When asked how many additional hours per week are needed for each type of existing instructional space, respondents indicated that the greatest need is for seminar space–small to medium-sized instructional space (Table 24).

Table 24: Average Additional Hours Per Week Requested by Room Type

Room Type	Response Count	Average Hours Requested	Total Hours Requested
Auditorium	50	7.7	386
Lecture	63	16.9	1,067[a]
Seminar	61	24.4	1,488[b]
Instructional Dry Lab	25	3.2	80[c]
Instructional Wet Lab	26	1.7	46
Computer Lab	32	11.8	376[d]
Design Studio	22	.1	2
Performance / Art Studio space	26	2.1	55[e]
Other	27	18.1	488[f]
		TOTAL REQUESTED	**3,988**

[a]**Lecture**: Anderson 336; Asian Languages and Cultures 75
[b]**Seminar**: Anderson 504; Undergraduate Education Initiatives 230; Honors Programs 80; Comp Lit 62
[c]**Instructional Dry Lab**: Bioengineering 20; Mechanical and Aerospace Engineering 30
[d]**Computer Lab**: Anderson 252
[e]**Design Media Arts** 30
[f]**Other**: New Student & Transition Programs 250

Notably, Anderson School of Management accounts for 1,092 (27%) of the additional hours requested.

When the total hours requested are plotted on the UCLA Campus Map by department location, the northeast and south central zones express the highest need for access to rooms for additional instructional hours (Appendix R) (Table 25)

Table 25: Department Requests for Additional Instructional Hours by Zone

Department	Hours Requested	Zone
Academic Advancement Program	0	
Aerospace Studies	9	SC
Anderson School	1092	Special
Anesthesiology	16	S
Anthropology	3	NW
Architecture and Urban Design	3	NE
Art	9	NE
Art History	0	
Asian American Studies Department	64	NW
Asian Languages and Cultures	147	NW
Atmospheric and Oceanic Sciences	0	
Bioengineering	20	SC
Biological Chemistry	0	
Biomathematics	0	
Biomedical Research Minor	2	S
Biostatistics	24	S
C&S Bio	0	
Center for Digital Humanities	40	NE
Chemical and Biomolecular Engineering	0	
Chemistry & Biochemistry	30	SC
Chicana and Chicano Studies	0	
Civil & Environmental Engineering	56	SC
Civil Engineering	20	SC
Classics	0	
College Academic Counseling	4	Special
College Academic Counseling - Athletics	20	Special
Communication Studies	0	
Comparative Literature	66	NC
Computer Science Department	56	SC
Cotsen Institute of Archaeology	0	
CTSI	22	S
Dean's Office	110	Special
Department of Surgery	2	S
Design Media Arts	42	NE
DGSOM Dean's Office	0	
Earth, Planetary, and Space Sciences	12	SC
Ecology & Evolutionary Biology	26	SC
Economics	38	SC
Electrical Engineering	46	SC
Emergency Medicine	0	
English (0565)	28	NC
Ethnomusicology	0	
Fielding School of Public Health	68	S
Film/TV	0	
Fowler Museum	8	NW
Geography	15	NE
Graduate Neuroscience IDP	8	SC
GSE&IS/Department of Education	18	NW

Head and Neck Surgery	0	
Health Policy and Management	13	S
Herb Alpert School of Music	40	NC
History	100	NE
Honors Programs	80	Special
Housing & Hospitality Services	0	
Human Genetics	1	SC
Information Studies	4	NW
Institute for Society and Genetics	45	SC
Institute of the Environment and Sustainability	75	SC
Integrative Biology & Physiology (PHYSCI)	34	SC
Interns and Residents	0	
Linguistics	12	NW
Luskin School of Public Affairs, Dean's Office	14	NE
Materials Science and Engineering	0	
Mathematics	0	
Mechanical and Aerospace Engineering	70	NC
Medicine - Cardiology	0	
Medicine Infectious Diseases & CARE Center	0	
Microbiology, Immunology, & Molecular Genetics	0	
Military Science	0	
MIMG	16	SC
MIMG	12	SC
Molecular Biology Institute	0	
Molecular, Cell & Developmental Biology	33	S
Molecular, Cellular & Integrative Physiology	8	S
Music	40	NC
Naval Science	8	NC
Neurobiology	2	S
Neurosurgery	20	S
New Student & Transition Programs	261	Special
Obstetrics and Gynecology	3	S
Office of Instructional Development	0	
Orthopedic Surgery	0	
Philosophy	95	NE
Physics & Astronomy	0	
Plastic Surgery	4	S
Political Science	28	NE
Psychology	75	SC
Public Policy	16	NE
Royce Humanities Group	0	
School of Dentistry	40	S
School of Law	122	NE
School of Nursing	32	S
Semel (Psychiatry)	0	
Slavic, East Euro & Eurasian Languages & Cultures	34	NC
Social Sciences Computing	0	
Social Welfare	8	NE
Sociology	30	NW
Spanish & Portuguese	70	NW
Statistics	10	SC
Theater	31	NE
Undergraduate Education Initiatives	257	Special
Undergraduate Neuroscience IDP	2	S
Undergraduate Research Center (Sciences)	12	SC
Undergraduate Research Center (Humanities)	11	NC
University Library	69	Special
Urban Planning	24	NE
Urology	3	S
World Arts and Cultures Dance	0	

When posed a related question, asking respondents to rank the importance of department needs, the results were consistent. Departments indicated that the greatest need is for instructional spaces of a capacity fewer than 60 (Table 26).

Table 26: Need Ranked by Importance

Need	Rank
Instructional Space: < 30	2.67
Instructional Space: 31-59	2.50
Instructional Space: 60-149	2.28
Conference/Meeting Spaces	2.22
Faculty Offices	2.19
Classroom Equipment	2.06
Instructional Space: 150-299	1.91
Classroom Furniture	1.80
Graduate Student Offices	1.77
Instructional Space: > 300	1.20

Rating Scale: 0 N/A 1 Not a priority 2 Moderate Need 3 Important over 2-5 years 4 Immediate Need

While seminar rooms with capacity of 20-59 are in high-demand, departments self-identified the following 15 rooms of that size, designated as instructional in the Space Inventory System, as scheduled fewer than 20 hours per week (Table 27).

Table 27: NGA Seminar Rooms Scheduled Fewer than 20 Hours Weekly

Building	Room
Bunche Hall	1221B
Dentistry	A3029
Dentistry	A3042
Franz Hall	3435
Moore Hall	1048
Moore Hall	2120
Perloff Hall	1243A
Perloff Hall	1243C
Perloff Hall	B320
Public Affairs	3343
Public Affairs	4320b
Public Affairs	4357
Public Affairs	4371
Public Health	41235
SAC	215

In regard to technology and equipment, about 70% of respondents indicated that the technology and equipment provided in their NGA instructional spaces sufficiently meets their current needs.

Survey data clearly indicates that departments are utilizing both instructional and non-instructional space to meet a variety of instructional and non-instructional needs. About 70% of survey respondents indicated that they used non-instructional space to meet their instructional needs (e.g. using a conference room as a classroom, etc.), and about 61% indicated they share space with other departments.

Approximately 80% of survey respondents indicated a willingness to share instructional space with other departments or units. (Table 28).

Table 28: Conditions to Share Space

Condition	Percentage of Respondents
Off-hours when our department doesn't need the space	46.6%
Other (please specify)	34.0%
Funds are provided to maintain shared instructional spaces	33.0%
Funds are provided for technology upgrades in shared instructional spaces	29.1%
Funds are provided to renovate shared instructional spaces	27.2%
A system is developed to facilitate equitable sharing of instructional spaces	26.2%
Exchange of instructional spaces with another unit	25.2%
For a reasonable rental fee	22.3%
Shared instructional spaces are located near our department	22.3%
None; there are no circumstances under which we would consider sharing	20.4%

Study of Least Utilized Rooms

The committee solicited additional information regarding the 100 least utilized rooms as reflected through the data for Fall 2016 as provided by the Registrar's Office, Academic Planning and Budget, and from departments as reported to the CAC Classroom and Instructional Space Survey (Appendix S). It should be noted that classroom and lab usage and utilization varies each term.

For the purpose of this study, a classroom was deemed underutilized if it was scheduled for fewer than 11.5 hours per week (33% of the recommended CPEC standard) or if the average enrollment in the room filled fewer than 50% of the available stations. An instructional lab qualified as underutilized if it was scheduled for fewer than 7.5 hours per week (33% of the recommended CPEC standard).

General Assignment Classrooms

In Fall 2016, ten GA classrooms had average enrollments that filled fewer than 50% of the available stations (Table 29).

Table 29: GA Classrooms with Average Enrollment Less than 50% Station Capacity

Building	Room
Dodd Hall	146
Dodd Hall	175
Geology	3656
Haines Hall	A25
Kaufman	101
Knudsen Hall	1240B
Public Affairs	1222
Public Affairs	1329
Young Hall	2200
Young Hall	4216

Although each room fulfills unique needs and faces different challenges, the following factors were noted for these rooms:

- Room assignments were made based on enrollment projection, but actual enrollment fell short of the projection.

- Departments with priority room assignments are not prohibited from under-scheduling or underutilizing the rooms.

- Courses may be assigned a room with larger capacity because no other room is available

Non-general Assignment/Departmental Rooms
Additional information was collected from 57 (63%) of the 90 underutilized NGA rooms. Two primary factors contributing to utilization include:

- Many class locations are not reported to the Registrar's Office; consequently, APB data underrepresents utilization.

- Many NGA rooms are used for multiple purposes, both instructional and non-instructional.

Respondents reported that NGA rooms were used for instruction as well as the following additional purposes (Table 30):

Table 30: Additional Purposes Served by NGA Rooms

PURPOSE	TOTAL ROOMS
Break Out Sessions	12
Meetings	10
Presentations	8
Training / Workshops	8
Open Computer Lab	7
Study Space	7
Student Projects	5
Moot court	2
Open Lab	2
Research	2
Studio / Workspace	2
TA Meetings	2
Exams	1
Faculty Office	1
Faculty Projects	1
Gallery/Exhibition Space	1
K-Rec Classes	1
Office Hours	1
Rehearsal Space	1
Shop / Construction	1
Special Events	1
Other Use	1

Notably, 8 respondents indicated that the room's small capacity limits its use for instructional purposes, and 7 respondents indicated that access to the room is restricted due to specialty equipment, which consequently limits utilization.

RECOMMENDATIONS

In its report to the Campus Space Committee in June 2016, the Committee on the Undergraduate Student Facilities Resource Plan made several recommendations, which are also echoed in this Committee's recommendations that follow.

- Extend class times to a daily period ranging from 8 a.m. to 9 p.m.
- Increase the utilization of departmental classrooms by establishing collaborations between different academic departments.
- Add classrooms by building a new campus learning center within a ten-minute walking proximity to other campus classrooms, or repurpose an existing campus building. The design of the center would be facilitated by the assessment of all learning spaces to be conducted by the Classroom Advisory Committee. The learning center should incorporate new, innovative, and enhanced pedagogical techniques in order to meet the instructional needs of faculty and the learning modalities of students.
- Create a study area in the courtyard directly south of Powell Library, addressing the required security needs.
- Identify outdoor sites for study areas (beyond south of Powell) and provide the required amenities, including tables, Wi-Fi, and power for mobile devices.
- Enhance and fund custodial services and deferred maintenance in the Powell Library.
- Explore relocating units now in Powell Library to other facilities to free up space for additional study activities.

The CAC supports the recommendations of the Undergraduate Student Facilities Resource Plan and offers additional recommendations to achieve campus space objectives. CAC recognizes that issues of pedagogy, design considerations and supportive technologies will require ongoing discussion and collaboration with faculty, students, and staff.

Although many of the recommendations require a shift in current campus culture as it pertains to concepts of learning spaces and utilization, information gleaned from departments demonstrates that many departments are already maintaining flexible spaces that serve several different functions to accommodate instructional needs. Additionally, many departments have forged relationships with partner departments and collaborate to share space and alleviate space issues.

With the exception of the recommendations regarding General Capital Project Guidelines, the recommendations that follow have been separated to correspond with the three working groups of the CAC: Inventory, Utilization, and Scheduling;

Design for 21st Century Teaching and Learning; and Study Spaces and Non-traditional Learning Spaces. It is important, however, to realize that these separations are somewhat arbitrary, and that all recommendations should be considered in light of designs that speak to the greater flexibility of any future learning spaces. As a result, the rationale provided for each of the recommendations builds on that of the others.

Guiding Principles

New thinking about instructional spaces has made traditional nomenclature like classroom, computer lab, and study space inadequate, if not obsolete. As spaces are designed to be more flexible, one space may accommodate lecture, group work, and individual study throughout a day. As technology and furnishings change, a room that serves as a computer lab four hours a day can serve as a lecture space, a proctored exam space, and a study space during the rest of the day.

That said, there are guiding principles that emerged and shaped the Committee's recommendations. These are as follows:

- Evolving pedagogical paradigms must play a central role in all future planning and design considerations for instructional, learning, and study spaces.

- Campus learning resources, including technologies, should be equitably allocated so that students have access no matter where they are or if they live on campus. A corollary is that, where applicable, compatible instructional spaces need to be available to all campus classes.

- Funding strategies (and development goals) must include building new spaces for the emerging education environment as well as maintaining and upgrading the current classroom and study spaces.

General Capital Project Guidelines

Recommendation 1a: Identify donor opportunities to support student-centered learning spaces ranging from study areas to instructional spaces that offer new and more effective ways of teaching and learning.

Creating teaching and learning spaces that meet the teaching needs and student expectations is an expensive proposition. This is particularly true in an environment, where technologies of teaching and learning change rapidly. Evidence exists that space can influence student learning. It is, therefore, important that UCLA is able to provide, maintain, and upgrade its learning spaces. Immediate targets might include developing experimental instructional rooms centrally located on campus with a longer range target that might include a new building. If UCLA is to continue its role as a premier learning environment for students, this must be a priority of the capital campaign.

Recommendation 1b: Develop and implement strategies to involve students and faculty more fully in generating design solutions for addressing space issues related to the campus educational experience. Such strategies might include a campus summit, design workshops, a website to facilitate ongoing feedback, and other ideas. The first of these activities may begin as early as in 2018.

Students and faculty are heavily invested in the physical and digital spaces in which they study, learn, teach, and conduct research. As the primary users of those spaces, and as those who are often aware of emerging practices, both groups need to be involved in planning for them in a regular advisory fashion and in charrettes or design workshops that explore needs and possibilities.

Recommendation 1c: Engage a design firm to support the strategic planning efforts related to creating new, innovative learning spaces.

This recommendation can apply both to study/learning spaces in the narrower sense or to study/instructional/project spaces in the broadest sense. Although we might start with the former to meet a critical need, ultimately the broader scope will probably be necessary to move forward on recommendation 1d. Capital Programs should be charged to draft an RFQ and engage a design firm, ideally after consultation with students and faculty.

Recommendation 1d: Assess the opportunity costs of remodeling existing space versus building new, more flexible spaces.

This recommendation is critical but can best be made in light of forward movement on each of the earlier recommendations. The results of this recommendation, in turn, will have a significant impact on strategies for recommendation 1a.

Recommendation 1e: Conduct a review of the existing arrangement with the Office of Instructional Development (OID) regarding assessing, planning, providing, and maintaining of equipment and technologies in general assignment instructional and common area spaces.

Although current arrangements for classroom maintenance and technology have evolved over time, it is not entirely clear that these are the best for moving forward, especially as learning spaces may assume different forms and locations in the future. As we consider the recommendations above and below, we need to revisit whether the existing organizational models are the best way to service campus spaces and to support local spaces.

Classroom Inventory, Utilization and Scheduling

The CAC recommendations under the heading of Inventory, Utilization, and Scheduling are drawn from a review of the utilization patterns of existing general assignment and department-controlled classrooms, a review of departmental needs in regards to instructional space, and a review of scheduling practices. Information for this set of recommendations was gathered by 1) a survey about classroom utilization administered to 183 departments, programs, and other units on campus; 2) a presentation to the Committee by the Associate Registrar Claire McCluskey, regarding scheduling practices; 3) a presentation to the Committee by the Director of New Student and Transition Programs, Roxanne Neal, regarding enrollment demand and classroom usage; and 4) a compiled list of the non-general assignment/departmental classrooms the Office of Academic Planning and Budget recorded as having scheduled for fewer than 11.5 hours weekly, instructional laboratories having scheduled for fewer than 7.5 hours weekly, and general assignment classrooms that, on average, enroll fewer than 50% of station capacity.

Recommendation 2a: Maintain a historical record of each course's quarterly enrollment patterns, including room assignment, station capacity, enrollment analysis, and time patterns.

The Registrar's Office will continue to maintain class data and will employ enhanced online reporting tools for use by departments. The expanded capabilities for maximizing space utilization should be employed as well as conducting a capacity analysis that projects the possible enrollment growth that can be absorbed over the next five years with existing instructional spaces. UCB, UC Davis, and UC Merced have undertaken similar evaluations.

Recommendation 2b: Implement analytic software that integrates with the degree audit system, which would identify to academic departments the remaining courses that students need for on-time degree completion. This information can support departmental decisions for resource allocation with class offerings.

The new scheduling software in the Registrar's Office will allow for greater matching of classes into classrooms. Such analysis should, however, be bolstered with a better understanding of the demand for particular courses. A common complaint of undergraduate students is that they cannot enroll in required courses because of lack of space, forcing them to take these courses in later quarters, and at times delaying their time to graduation. Thus, enrollment caps should align with projected student demand for courses. At the same time, a better understanding of student demand will help the assignment of instructional spaces with appropriate room capacity. Using degree audit data will assist in this process.

Recommendation 2c: Develop a methodology for use of the online scheduling platform to include all general assignment (GA) and non-general assignment (NGA) spaces suitable for instructional and auxiliary purposes, requiring departments to input room availability each quarter.

The Registrar's Office controls the scheduling of the 192 general assignment (GA) classrooms. However, there is no central system that measures what times and how often the departments are using the instructional spaces they control. Such information may be useful for the development of a departmental classroom sharing system (see recommendation 2j). The Registrar's Office is in the process of upgrading its class scheduling system and working towards full implementation to be used campus-wide.

Recommendation 2d: Survey classrooms (GA and NGA) scheduled for instructional purposes fewer than 18 hours weekly and instructional laboratories scheduled fewer than 12 hours weekly to determine what physical, technical, or other modifications are appropriate to improve their utilization.

Classrooms scheduled fewer than 18 hours weekly and instructional laboratories scheduled fewer than 12 hours weekly represent rooms scheduled fewer than 50% of the standard set by the California Postsecondary Education Commission (CPEC). In 1970, California adopted Assembly Concurrent Resolution 151, establishing the standard that a room should be scheduled, on average, 75% of the 70 hours that fall between 8 a.m. and 10 p.m., Monday through Friday; i.e. 52.5 hours per week. During those scheduled hours, two-thirds (66.7%) of the stations should be occupied. Combining room availability with occupancy, 66.7% of 52.5 hours, the standard is 35 weekly student contact hours per station. In 1990, UC adopted the standards proposed in the CPEC report, Capacity for Learning, which reflects a classroom utilization standard of 35 hours. Lab hours are based on a lab being scheduled 45 hours per week between 8:00 a.m. and 5:00p.m., Monday through Friday, with 23.4 weekly student contact hours for lower division and 17.6 weekly for upper division courses. The CPEC guidelines were reviewed in 2003.

Recommendation 2e: Achieve a better temporal distribution of classroom use by enforcing UCLA Policy 870 pertaining to GA classrooms, specifically requiring that no more than 60% of classes are scheduled between 9:00 a.m. and 3:00 p.m. (prime time), and 20% of classes are scheduled on Fridays. Faculty should be encouraged to teach before 9:00 a.m., in the evenings, and on Fridays to enhance classroom use.

While UCLA Policy 870 gives clear instructions regarding the distribution of classrooms throughout the day and the week to avoid congestion, these instructions are not enforced because most departments are requesting the scheduling of their classes during prime time from Monday to Thursday. The Committee believes that a better enforcement of UCLA Policy 870 will help achieve a more efficient utilization of existing instructional spaces during prime time.

Recommendation 2f: Develop a monitoring system for departments requesting rooms that have capacity higher than 125% of their maximum enrollment over the last three years. Classes should be reviewed and departments may need to adjust enrollment capacities, merge sections, or perform other changes to increase utilization and or accept classroom assignments more closely aligned with registration numbers.

Departments have requested GA classrooms that have a much higher capacity than the historic enrollment of the courses that these classrooms are hosting. This creates inefficiencies and prevents the use of these classrooms by other departments that have courses with actual enrollments closer to the capacity of the room. Historical enrollment data should be evaluated when scheduling enrollment caps and assigning rooms.

Recommendation 2g: Review current priority scheduling agreements to determine alignment with campus scheduling standards and adjust as needed.

Recommendation 2h: Preferential scheduling of classrooms should be limited to extenuating circumstances and when room furnishings and/or technology cannot be accommodated in a nearby building more closely sized to anticipated enrollment.

In many cases, priority scheduling is being provided to departments from a historical perspective and not necessarily related to current need. The departments requesting priority scheduling of a classroom should give a clear justification for their request. Requests that relate to instructional quality, and/or the need to use particular equipment or classroom technology should have priority over requests relating to convenience or habit.

Recommendation 2i: As departments finalize course schedules, any unneeded GA classrooms must be released as soon as possible-no later than one week prior to the first day of instruction–to provide sufficient time for adjustments to room assignments to be made.

In certain instances, departments neglect to inform the Registrar's Office that a classroom has been cancelled with the result that much needed instructional space is not utilized for a whole quarter. Departments that consistently notify the Registrar's Office too late to allow for reallocation may receive lower classroom scheduling priority in future quarters.

Recommendation 2j: Midterms should be offered during allocated class time; however, when instruction requires scheduling outside of class time, they must occur at days and times determined by the Registrar's Office to mitigate schedule conflicts and overlaps with other classes.

The scheduling of midterms during prime time (9:00 a.m. to 3:00 p.m.) creates conflicts with other classes that are occurring during these times. Therefore, midterms should be ideally scheduled either during the allocated classroom time or during the less utilized times of evenings and weekends.

Recommendation 2k: Create department cohorts and develop an incentive system for departmental classroom sharing.

The Classroom and Instructional Space Survey showed that nearly 80% of the departments are willing to share departmentally controlled space with other units under certain circumstances and/or incentives (see Appendix P for details). The

scheduling system should be able to provide the appropriate online platform, where departments can indicate the instructional spaces they control and can release to other units, for a quarter. It is advisable to first develop cohorts of sharing-friendly departments (e.g. all Engineering departments). Local groups could later be combined into larger sharing cohorts, as departments see that sharing works and benefits them. It is important to have Deans agree and encourage the development of pilot sharing cohorts. It may be also necessary to provide incentives for participation, as well as consequences when rooms are severely underutilized (e.g. the department losing management privileges over the room). Incentives could include central resources to modernize the shared room. Departmental participation in the cohorts should be voluntary, and Deans and Chairs should determine the incentives.

Recommendation 2l: Before departments convert NGA instructional space to other uses, they must demonstrate that any displaced classes can be accommodated into other departmental instructional rooms or confirm with the Registrar's Office that sufficient existing GA classroom space can accommodate the need.

Recommendation 2m: State-supported academic programs should take priority in their requests for GA classrooms over all other programs and UCLA Extension.

Recommendation 2n: Develop a process and framework to identify, prioritize, and recommend instructional spaces and laboratories (GA and NGA) in need of renovation, to inform planning for renovations that typically occur during the summer months.

The process to identify potential spaces in need of renovation should be integrated into an existing reporting system to avoid redundancies. Potentially, renovation requests and information regarding instructional and study spaces could be collected each fall as departments update the Space Inventory database.

Recommendation 2o: Explore opportunities to add additional instructional spaces or buildings in the northeast and south central regions of campus.

The CAC classroom and instructional space survey asked departments how many additional instructional hours are needed to meet their current needs. When this data was plotted geographically on the campus map, two zones emerged as having the greatest need for instructional space: northeast and south central (see Appendix R).

Recommendation 2p: Evaluate existing classrooms to realign room capacities with desired enrollment caps. The rooms in need of immediate evaluation are rooms with capacity of 60-99 seats and consistent enrollments under 50% capacity.

Both the Registrar's data and CAC survey responses indicate there is high demand for rooms with a station capacity of 20-59. Rooms with capacities in the 60-99 range should be evaluated for possible conversion–permanent or flexible–to smaller rooms that may more appropriately meet enrollment demand.

Design for 21st Century Teaching and Learning

In its report to the Campus Space Committee in June 2016, the Committee on the Undergraduate Student Facilities Resource Plan recommended that the University creates innovative learning space environments to meet the instructional needs of instructors and the learning modalities of students; it suggested the identification of a small number of campus learning spaces (5 to 10 learning spaces with different seat capacities in the general assignment and/or department controlled inventory), where modern educational technology equipment, if needed, is installed, prototyped, and refreshed regularly to support new or enhanced pedagogical techniques.

While this Committee concurs with the suggestion that a small number of learning spaces should be dedicated to experimentation, it is important to engage faculty and students in discussions regarding the evolving instructional needs of the 21st Century. The following recommendations are made in recognition of the need to engage faculty and students regularly to revisit pedagogy and design concepts. Additionally, the new spaces should be flexible in terms of design and available technologies.

Recommendation 3a: Develop model classroom designs that could be implemented across campus to support new teaching pedagogies. The Classroom Advisory Committee should evaluate how these classrooms are received and used by faculty and students.

Studies on the impact of teaching spaces that are flexible and equipped with different technologies show that such spaces 1) change the spatial relationships between student and faculty; 2) challenge faculty to redesign their teaching strategies; and 3) seem to produce better learning outcomes for students. (Doorley, Perks, UC Berkeley, University of Queensland). Thus, efforts to enhance student learning experiences would be bolstered if the campus has spaces for faculty to experiment with, and if we monitor and evaluate the impact of such spaces on student learning. These experimental classrooms will also be critical for our decision-making on 1d above. Likely locations could be rooms used to temporarily house departments from buildings undergoing renovation.

Recommendation 3b: Appoint a task force to work with the Office of Instructional Development (OID), Online Teaching and Learning Initiative (OTLI), Instructional Enhancement Initiative (IEI), faculty, and students, to investigate expanded pedagogical possibilities for lecture capture. This task force should build on initiatives already underway and recommend a set of standards.

Lecture capture, the recording of lectures for student reuse after the lecture, has been the key component of BruinCast, a service provided by the Office of Instructional Development and funded, in part, by student IEI fees. New lecture capture technology, however, provides many more options than it did when UCLA first implemented BruinCast. The technology exists to broadcast lectures synchronously via learning platforms that allow students to remotely take notes

time linked to slides and lecture and to communicate directly with their questions. In Fall 2016, the Online Teaching and Learning Initiative and the Office of Instructional Development will host a conversation with faculty to consider what they envision as the best use of lecture capture and whether these new tools might make it possible for students to attend lectures remotely, lessening demand for physical spaces in classrooms. Student representatives on Senate committees and USAC are interested in having conversations in Fall 2018 about greater use of lecture capture. We should build on this momentum.

Recommendation 3c: Determine space needs to support online and blended courses.

As is the case with 3b above, much of this work is underway but the results and recommendations need to be incorporated into space planning. For example, blended and online courses for students may still need physical spaces for students to take proctored exams. For classes with enrollments reaching into the hundreds, this becomes a pressing issue. This is also the case for students enrolling in online courses from other UC campuses, some of which require that students have to take proctored mid-terms or finals. As blended courses require more immediate technological support in case of a problem, many institutions are locating tech support within buildings or classroom clusters. The issue of the technological infrastructure and connectivity become critical for online and blended courses.

"Active learning is anything that involves students doing things or thinking about what they are doing."

An Introduction to Evidence-Based Undergraduate STEM Teaching
Dr. Kathryn Spilios
Director of Instructional Labs
Boston University

Recommendation 4a: All major renovations or new construction projects should incorporate communal spaces that provide for student engagement.

New teaching and learning approaches suggest that students will benefit from increased opportunities to interact with each other and with faculty in informal ways. Communal spaces facilitate those exchanges generally. Communal spaces near classrooms encourage exchanges with classmates and faculty that tend not to happen, if space only allows for moving in and out of those rooms. Such spaces can contribute to extended intellectual discussion and to a stronger sense of membership in the UCLA community. Preliminary efforts could even begin in spaces such as the wide halls of Dodd Hall or the lower floor of the Humanities building.

Recommendation 4b: Create an annual fund commitment of $2,000,000 that can be used for new or upgraded study and project spaces (e.g., video production, maker spaces).

Although outside funding (see 1a) is desirable, the campus cannot wait to move forward on creating new study, project, and instructional spaces. A substantial commitment to building new spaces will provide us with opportunities to meet pressing capacity and pedagogy needs and evaluate their effectiveness. In turn, the results will help us to better understand some of the concerns that will need to be raised to assess the best paths in 1d and other recommendations above.

Recommendation 4c: Identify specific strategic buildings on campus with quality study space and make them available late into the evening. Fund enhanced custodial services to ensure a clean and inviting environment and ensure that travel to and from them is safe.

Similar to recommendation 4d below, this recommendation seeks to identify solutions to address immediate needs that are perhaps easier to implement faster. It also asks us to consider whether support services, designed primarily for daytime and evening use are adequate for a 24-hour campus. In doing so, it challenges us again to consider our funding models for the evolving campus environment. Some suggested locations might include Powell Library, the Biomedical Library, YRL. Consult with ASUCLA regarding potential spaces along Bruin Walk, Ackerman, and the Wooden Center that might also be desirable if good lighting, power, and WiFi are made available.

Recommendation 4d: Explore the possibility of a facility near the northwest Village that could be open late into the evening to serve students who live off-campus.

For many students who live off-campus but in and around Westwood, study space is at a premium as apartments are rented to maximize the number of residents in order to keep rents more affordable. Student populations found in Starbuck's, Coffee Bean, Peet's, and other Westwood establishments that provide free WiFi demonstrate that having appropriate study and group space near those apartments

is a high priority for students. The Gayley Center might provide such a space in Westwood and some consideration might be given to a site located south of Wilshire for students living in that area.

Recommendation 4e: Evaluate the current use of machine shops on campus to determine if consolidation/ downsizing is possible. Explore the opportunity to repurpose this high bay inventory into maker spaces.

As a rethinking of teaching and learning methodologies is occurring, new kinds of learning spaces should emerge to support them. Maker spaces in which students can design and make things, video production studios, and other such spaces have either not been on UCLA's planning horizon or have been limited to the schools most likely to need them (e.g., Theater, Film & Television or Henry Samueli School of Engineering & Applied Science). The creation of such spaces on the Hill and other campuses, however, has demonstrated student demand and faculty support. But we also need to provide such spaces for students who live off-campus. The machine shops (such as in the Humanities Building, Life Sciences Building, etc.) provide potentially appropriate spaces for these new uses, especially given that some of their previous uses have declined with changes in technology.

Recommendation 4f: Prioritize use of Powell Library for studying and direct student programming.

Well-developed proposals are already in place for this transformation of Powell Library but they have been put on hold as other space priorities have arisen. Immediate project opportunities include opening the south entrance; improving lighting and seating in the south courtyard; moving the Arts Library into the Powell reading room currently occupied by IT staff; reconfiguring the Instructional Media Lab to enable broader usage. The work of this committee indicates that the benefits for these changes are critical. The increased usage of YRL demonstrates clearly how changes in space can transform student use. The time has come to move forward on the steps that will make these changes in Powell Library possible.

Recommendation 4g: Ensure adequate informal study spaces by making minor improvements (including furniture) in common areas of existing buildings as well as in outdoor spaces.

Withstanding any potential limitations due to the Fire Code, there are many existing spaces used for pedestrian traffic and informal gathering that could be reconfigured to provide study and small group meeting spaces with very little capital outlay (e.g. provide benches in the basement of the Humanities building or in Dodd Hall, where students tend to gather prior to and after their classes).

POTENTIAL PROJECTS

The Office of Instructional Development (OID) provides information about recent renovations of general assignment classrooms online (Appendix T and Appendix U).

Additionally, the following rooms are scheduled for renovation in Summer 2017 (Table 31):

Table 31: Planned Classroom Renovations in Summer 2017

Building	Room	Room Type	Current Station Capacity
Dodd Hall	147	Classroom	366
Haines Hall	A2	Classroom	129
Haines Hall	A6	Seminar	20
Haines Hall	A18	Classroom	141
Haines Hall	A20	Seminar	20
Haines Hall	A24	Classroom	25
Haines Hall	A25	Classroom	68
Haines Hall	A28	Seminar	20
Haines Hall	A44	Classroom	50
Haines Hall	A74	Classroom	39
Haines Hall	A76	Classroom	24
Haines Hall	A78	Seminar	16
Haines Hall	A82	Classroom	25
Haines Hall	39	Auditorium	370
Haines Hall	110	Seminar	20
Haines Hall	122	Seminar	20
La Kretz Hall	110	Classroom	352
Rolfe Hall	1200	Classroom	292

Planned renovations include the following innovative changes and upgrades:

- Haines A44 is designed to support a more flexible teaching style. Three of the four walls will have full writing and projectable surface, with one projector capable of a large image. Four interactive short throw projectors will be installed for group work, with software to allow sharing among the various presentation systems. Two types of table and chair sets amount to 40 seats that can be arranged in multiple ways. The media controls will be portable allowing the instructor to move about the room freely.

- Haines 39, a large auditorium, will receive a refreshment renovation similar to that completed in Moore 100 in 2016. The front wall will be redesigned to allow for more sophisticated projection, the obsolete media booth in the back will be removed to create additional seating, and some changes to the seating plan will improve sight lines. Shutters and automatic shades will be installed to allow for natural lighting when appropriate. Lighting will be brought up to standard, and all seats and flooring will be replaced. A full suite of modern teaching equipment will be included in an ADA-compliant podium.

Additionally, the Slichter breezeway, located at ground level, has been identified as the potential site for new construction of about five GA classrooms with additional space for technical and other support services. These rooms could be potentially developed as flexible, experimental spaces as proposed in Recommendation 3a herein.

Many areas where students currently gather–dining areas, hallways, and outdoor spaces–are potential candidates for renovation and improvements as study and informal learning spaces. OID has identified the following spaces for possible use as study spaces (Appendix V and Table 32):

Table 32: Potential Locations for Study and Informal Learning

Building	Description
Bunche Hall	Courtyard
Court of Sciences	Courtyard
Dodd Hall	Entrance lobby
Dodd Hall	Courtyard
Haines Hall	Courtyard adjacent to Room 39
Humanities	Roof area over Physical Sciences machine shop
Kinsey Pavilion	Courtyard
Law	Courtyard
Math Science	Courtyard adjacent to 4000A
Phys Astro	Courtyard adjacent to 1425A
Rolfe Hall	Entrance lobby
Rolfe Hall	Courtyard

The UCLA Space Inventory System identifies the following eight rooms of at least 600 square feet as designated for storage. As these rooms are located on central campus they may be good candidates for conversion to instructional or study spaces (Table 33).

Table 33: Storage Rooms of More than 600 Square Feet Located on Central Campus

Building	Room	Square Feet
CNSI	5324A	1,040
HAINES HALL	B11	930
HAINES HALL	B26B	1,225
KAUFMAN	B060	7,624
MATH SCIENCE	2000M	1,500
MATH SCIENCE	4201	713
PHYS ASTRO	1704B	675
POWELL LIB	330	783

Per APB and Registrar's Office data, rooms with capacity between 60 and 99 are scheduled least frequently and have average enrollments that leave many available seats unfilled. The following 20 rooms of said capacity may be candidates for downsizing-either permanent renovation or creation of flexible spaces (Table 34).

Table 34: Candidates for Downsizing

Building	Room	Current Station Capacity
Boelter Hall	2444	80
Boelter Hall	2760	71
Boelter Hall	5249	92
Boelter Hall	5440	65
Botany	325	79
Broad Art Center	2100A	83
Dodd Hall	146	81
Dodd Hall	170	63
Dodd Hall	175	98
Franz Hall	2258A	82
Geology	3656	86
Haines Hall	A25	68
Phys Astro	1434A	95
Pub Affairs	1222	98
Pub Affairs	1234	98
Pub Affairs	2214	89
Pub Affairs	2250	60
Pub Affairs	2270	78
Young Hall	2200	84
Young Hall	4216	61

Departments identified the following non-instructional spaces as being used for instruction greater than 18 hours per week in Fall 2016 and may be candidates for renovation and use as dedicated instructional spaces (Table 35).

Table 35: Departmental Rooms Uses for Instruction More than 18 Hours Weekly

Building	Room	Current Station Capacity
Bunche Hall	9294	18
Bunche Hall	9383	34
Cornell Hall	D310	46
De Neve Commons	P350	477
Factor	A660A	172
Haines Hall	314	20
Health Science	43105A	117
Life Science	A830	12
MacGowan	1330	50
Math Science	6221	25
Melnitz Hall	1422A	75
Melnitz Hall	1409	270
Melnitz Hall	1441	4
Molecular Science	3440	20
Moore Hall	3027	45
Schoenberg	1200	144
Young Hall	1379	69

Departments indicated that 12 of the classrooms or instructional labs scheduled fewer than one-third of the recommended hours per week could be better utilized if the room was renovated (Table 36).

Table 36: Requested Renovations to Increase Utilization

Building	Room	Current Station Capacity	Limitations
Boelter Hall	4404	65	Projection not possible (share screens instead); AC problems.
Dentistry	13041	105	Good space but needs an update, more power.
Law	A122	32	Power is routed through to table tops; tables are fixed to floor which limits how the room might be used; students at far end of room have trouble seeing the whiteboard as room is long and narrow. Would like power outlets in floor with moveable furniture and multiple projection so all students can see.
Law	3483	12	Courtroom furniture limits instructional uses; portable or collapsible courtroom setup would free up space for instruction.
Macgowan	1200B		Bathrooms built in 1960s are in disrepair. 300 students daily plus guests who come to see shows.
Perloff Hall	1224	30	Potential maker space; however, Department expresses need for exclusive use.
Perloff Hall	1243A	75	Poor lighting, dirty curtains, ceiling tiles scraped off but glue remains, windows leak.
Perloff Hall	1243B	32	Poor lighting, dirty curtains, ceiling tiles scraped off but glue remains, windows leak.
Perloff Hall	1243C	40	Poor lighting, dirty curtains, ceiling tiles scraped off but glue remains, windows leak.
SAC	215	25	Program has 100 students, room holds 30. If students could use locker room at pool, the space could be reconfigured to accommodate more students (adding the 2 adjoining locker rooms adjacent to the room to the instructional space).
Young Hall	3340	24	If absorbent acoustic ceiling tiles were removed, the lab could be rated for additional organisms and used more often.
Young Hall	3370	24	If absorbent acoustic ceiling tiles were removed, the lab could be rated for additional organisms and used more often.

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