



2017

**GENERAL PURPOSE
CLASSROOM
MASTER PLAN**



UNIVERSITY OF
MARYLAND®

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EXECUTIVE SUMMARY

Background and goal: The Teaching Facilities Committee was charged by the Provost's Office to audit information about General Purpose Classrooms (GPCs) on campus in light of evolving innovative learning pedagogies and environments, efficient course scheduling, and technological developments. As stated in the University's 2016 Strategic Plan, the ultimate goal is to *"transform the student experience"* and to *"create modern, flexible and collaborative environments throughout campus to support high quality student-faculty interactions."* The Classroom Master Plan provides a strategic framework to guide future decision-making related to the governance, planning, and operations of inspiring instructional spaces to support the teaching mission of the University of Maryland.

Members of the Teaching Facilities Committee, representing the Office of the Provost, the Division of Information Technology, Office of the Registrar, and Facilities Management engaged to understand the needs of our faculty and students, to assess the existing physical spaces, to evaluate the available technology resources, to outline the scheduling challenges, and understand the existing processes related to the planning and design of classroom space.

Strategy: Provide recommendations on Governance, Planning, and Operations to enhance the GPCs infrastructure, scheduling processes, policies and procedures, and technology upgrades as well as the composition of the classroom inventory.

- **A sustainable governance structure that effectively establishes the vision, pace and priorities of all institutional investments related to GPCs to address:**
 - Absence of guiding principles to guide future decision-making related to GPCs
 - Limited vision guiding the design of spaces to inspire students' learning
 - Lack of policies governing both academic and non-academic use of GPCs
 - Inefficient and non-inventive use of classroom spaces
 - Outdated standards for physical space and technology design
- **Capacity plan related to all aspects of general purpose classroom spaces - pedagogy, physical environment, scheduling, technology, to address:**
 - Lack of coordinated effort to upgrade both classrooms and building infrastructure
 - Absence of consistent performance indicators and metrics to inform strategic decisions
 - Inaccuracies in classroom facilities inventory; not accurately reflecting actual uses
 - Lack of a centralized, shared classroom resource database
 - Non-compliance with federal and state regulations and codes
 - Uncertainty of technology attributes and capabilities in each classroom
- **Enterprise strategy for classrooms management and operations to address:**
 - Instructors experience with technology support offices is inconsistent
 - Need for an enterprise solution to manage classroom upgrade requests
 - Ineffective system to optimize class scheduling and meet special accommodations
 - Lack of comprehensive emergency preparedness plan related to classroom spaces
 - Lack of tools to manage current classroom guidelines

PART I - FINDINGS

Part I of the General Purpose Classroom master plan summarizes existing conditions primarily drawn from the Spring Semester 2016 as well as historical data spanning several years prior. The following are relevant considerations which have informed the recommendations found in Part II of the Plan.

Current Shortcomings

- *Mismatch between supply and demand:* The majority of Maryland's classes (64%) are small, with enrollments of 30 or fewer students, 20% having fewer than 20 students. By contrast, the number of classrooms sized at less than 30 seats accounts for only 23% of the classroom inventory.
- *Physical Conditions:* Poor physical condition and aging finishes and furnishings in many of the classrooms and problems with room features such as screens covering the instruction board when in use. Perhaps the most significant problem is that many of the classrooms are "overfurnished" when compared to modern seating standards, though limited effort is being made to reduce capacity in some rooms, there remain a great number in which the crowded conditions negatively impact function and usability.
- *Scheduling:*
 - *Policies:* Widespread non-conformance to scheduling guidelines and lack of enforceable policy regarding standard blocks, course spread over the scheduling day, and seat fill create structural difficulties in the scheduling grid which prevent efficient use of classroom space.
 - *Tools:* Continued reliance on a cumbersome and outdated Student Information System limits the extent to which new scheduling tools can be deployed and inform decision making.
- *Technology:*
 - *Design:* Wide variety of system configurations leads to uncertainty of technology attributes and teaching capabilities in each classroom. There is a misalignment between the classroom capabilities and the instructor's technology needs.
 - *Installation & Repair:* Costs to maintain and support the technical infrastructure and equipment over time are not properly planned and budgeted.
 - *Support and Operations:* Existing scattered technology support offices across campus results in inconsistent quality of user experiences, confusion (who to call), and delays in responding to incidents reported to DIT.

- *Planning:*
 - *Preliminary Planning:* The existing process for determining classroom classification (GPC/Department) size, and type on Capital Projects occurs independently from TFC and the Office of the Registrar resulting in missed opportunity and lack of clarity in early decision making. For remodeling projects, there are no existing guidelines for prioritization of classroom upgrade projects.
 - *Design Standards:* Design Standards for the physical classroom space and technology systems are outdated and do not reflect current best practices, resulting in a high degree of variation in room fit-outs.
 - *Accessibility:* There remain a number of classrooms in inventory that do not meet ADA guidelines, specifically in the area of accessibility to the primary instruction area.
- *Governance:* There is no formal vehicle(s) by which issues related to scheduling, technology, and pedagogy are reviewed and brought to TFC for discussion. Additionally, TFC lacks a formal process for coordination of day-to-day planning and operations issues. Finally, there is no established group of performance metrics by which process toward stated goals can be regularly measured.
- *Emergency Preparedness:* Not all spaces designated as classrooms are scheduled in the Student Information System, which informs security and emergency responders of locations of activity. There are no existing policies or procedures in place with regard to classroom security and emergency preparedness and no established path of communication to/from classroom users in preparation for or in times of emergency.
- *Cost recovery:* There is no university-wide policy for cost recovery when instructional spaces are used for non-academic events, addressing charges for room usage, technology maintenance and support, and clean up.

PART II- RECOMMENDATIONS

GUIDING PRINCIPLES

Guiding principles represent the core values, goals, and aspirations for all general purpose classrooms at the University of Maryland. The establishment of these principles is critical to provide the foundation for future decision-making as it relates to governance, planning and, operations for General Purpose Classrooms.

The 8 Guiding Principles

1. *Environmental Quality* - *Students have a fundamental right to an inspiring, accessible learning environment that is physically comfortable and allows them to clearly recognize the material as it is presented.*
2. *Pedagogy* - *A range of space configurations shall provide support for evidence-based practices to facilitate learning, and support diverse pedagogical approaches.*
3. *Planning and Design* - *Appropriate distribution of varying classroom spaces across campus shall serve the academic disciplines residing in each region of campus.*
4. *Technology and Tools* - *Current and progressive technologies are foundational to support learning activities, enhance communication, and enable the distributed interactivity anticipated for the classroom.*
5. *Scheduling* - *Every effort is made to ensure that classrooms are assigned fairly, used appropriately, and managed efficiently to accommodate the University's academic and instructional needs.*
6. *Support and Operations* - *We strive to prevent unnecessary loss of class time by performing room inspections and providing timely resolution to applicable technological and facilities issues as they arise.*
7. *Community Engagement* - *Regular feedback from instructors and students and community engagement is key to seizing new opportunities for classroom enhancements and improvements of support services.*
8. *Sustainability* - *The University adopts environmentally sensitive and sustainable approaches in constructing, operating, and fitting out General Purpose Classrooms.*

RECOMMENDATIONS

TO IMPROVE THE GOVERNANCE, PLANNING, AND OPERATIONS OF THE GENERAL PURPOSE CLASSROOM INVENTORY, THE UNIVERSITY OF MARYLAND WILL TAKE THE FOLLOWING ACTIONS:

RESTRUCTURE CLASSROOM GOVERNANCE

Restructure governance (TFC) to increase faculty input and incorporate regular focused analysis and discussion of issues related to Pedagogy, Technology, and Scheduling. Track progress toward established goals through regular review of performance metrics.

RESHAPE THE CLASSROOM INVENTORY

Rebalance GPC distribution in each region of campus to reconcile issues of classroom supply vs. demand. This effort is to be integrated with concurrent efforts to both right size the inventory and improve general physical conditions.

STREAMLINE CLASSROOM TECHNOLOGY

Implement a move toward more streamlined technology planning which will have a direct relationship to classroom type and anticipated pedagogy.

ENHANCE OPERATIONAL EFFECTIVENESS

Scheduling: Improve scheduling effectiveness by establishing enforceable policies and criteria regarding use of classroom space (e.g. seat fill, utilization, scheduling patterns, room priority etc.) Improve scheduling efficiency by implementing a move to a single, unified system for classroom scheduling information.

Technology Support: Unify the GPC's instructional support on campus by creating a headquarters with a classroom operations center that will manage all incidents and strategically dispatch technicians to all sectors of campus in a reliable, efficient, and effective way.

Capital Project Planning: Classify classrooms as GPC or Departmental during initial programming; involve TFC and the Office of the Registrar to determine classroom size and type needed; and incorporate life-cycle and support costs in overall budget.

Staff Resource Planning: Reevaluate the type and number of necessary support positions before/after major changes in the classroom inventory to plan and provide for the appropriate staffing complement to maintain the level of service desired.

Cost Recovery: Develop a fee schedule for use when GPCs are used for non-academic events, addressing charges for room usage, technologies, and clean-up.

**SET HIGH
STANDARDS**

Design Standards: Update design standards for the physical classroom space to reflect current best practices and relate directly to room type and pedagogy. These should establish a baseline level of quality so that over time, there is a consistent “Maryland classroom” look and feel befitting the high caliber of our students and faculty. Determine the extent to which these standards will be applied to existing spaces during upcoming “accelerated renovation period”.

ADA: Continue to enhance ADA accessibility to all GPCs.

**BE PREPARED FOR
WHAT COMES NEXT**

Emergency Preparedness: Adopt and disseminate policies and procedures specific to classroom security, and establish a clear path of communication to/from classroom users in preparation for and in times of emergency. Schedule all classes centrally so that students and faculty can be located when necessary.

Informed Planning: Keep pace with current inventory demands and analyze forecasting data to make proactive decisions regarding inventory shaping to support campus needs.

**ENGAGE WITH THE
TEACHING AND
LEARNING
COMMUNITY**

User feedback: Solicit input from the campus community regularly regarding their experience, needs, and ideas as they relate to classrooms.

Publish Progress: Publish an annual “State of the General Purpose Classrooms” report to highlight progress that has been made during the year toward goals of creating new or renovated facilities, meeting performance metrics, etc.

The 2016 Strategic Plan Update states that *“to transform the student experience, UMD needs to accelerate renovations and create modern, flexible, and collaborative environments throughout campus in support of high-quality student-faculty interactions.”* The pace of this acceleration will depend largely on funding. As a point of reference, classroom upgrade costs per square foot are included below for “order of magnitude” budget purposes.

- *Refurbishing existing spaces:* \$80 per square foot

Changes primarily “cosmetic” in nature such as new finishes, fixtures, furnishings, and upgraded lighting. Refurbishing does not address structural changes or major systems/building infrastructure needs such as heating, ventilation, and air conditioning.

- *Substantial renovation:* \$175 per square foot

Changes include all those listed in “Refurbishing existing spaces” above as well as significant changes in room configuration and heavy infrastructure systems work (modernization or replacement of HVAC systems, electrical service, etc.)

In the coming year, the TFC will seek to reconcile the additional funding that will be designated to support this effort with those goals listed above in a comprehensive program and timeline for improving the GPC inventory.

INTRODUCTION

I. STATEMENT OF PURPOSE

The purpose of the General Purpose Classroom Master Plan is to provide a strategic framework to guide future decision making related to the governance, planning, and operations of inspiring classroom spaces. As stated in the University's 2016 Strategic Plan Update, the ultimate goal is to *“transform the student experience”* and to *“create modern, flexible and collaborative environments throughout campus to support high-quality student-faculty interactions.”*

The Classroom Master Planning Team has engaged in a systematic analysis of the General Purpose Classroom data to gain a deeper understanding of the state of these environments at the University of Maryland. This document includes recommendations made in response to faculty input as well as a survey of the existing conditions in 318 classrooms and related usage data spanning the past several years.

As incremental changes occur within the classroom inventory over time, this Plan is not limited to a static set of spaces. Rather, it provides criteria and guidelines to follow as changes to the inventory are constantly made to align with the goals and objectives for teaching and learning at the University of Maryland.

1.1 CONTEXT FOR THE MASTER PLAN

In the fifteen years preceding the creation of this Plan, capital investments in new General Purpose Classroom space have been limited and sporadic. Today, we are living in a historic moment of change. Having recently suffered the loss of twenty-one classrooms as a result of repurposing Cole Field House, we are on the brink of realizing the addition of 24+ new state-of-the-art classrooms to the General Purpose Classroom inventory upon completion of Tawes Hall (2016), Edward St. John Learning and Teaching Center (2017), A. James Clark Hall (2017) and the Brendan Iribe Center for Computer Science and Innovation (2018). These innovative spaces embrace exciting new classroom design concepts and inevitably introduce a unique opportunity to campus leadership to rethink the governance, planning, and operations of the 318+ General Purpose Classrooms on campus.

As classrooms are a somewhat “fluid” resource, it is necessary to identify a fixed point in time to provide an understanding of existing conditions as a foundation for the Master Plan. The following summary of existing conditions is primarily drawn from the Spring Semester 2016 as well as historical data spanning the past few years prior to the development of the General Purpose Classroom Master Plan.

II. SCOPE

GENERAL PURPOSE CLASSROOM (*defined*)

A General Purpose Classroom (GPC) is defined as any classroom space that is shared across all academic programs and, centrally managed. A GPC meets all three of the following criteria:

- *Designed (Space and Technology) by central campus resources;*
- *Scheduling managed by the Registrar's office*
- *Maintained and supported by central campus resources.*

Specific Exclusions:

1. Included in the inventory examined for the purpose of this analysis, there are twenty one classrooms located in Van Munching Hall currently designated as part of the GPC inventory, which do not meet any of the criteria listed above and are operated by the school of BMGT.
2. Approximately 22% of the total classroom space allocation on campus is categorized as Departmental Classroom Space that serves the specialized needs and requirements of specific departments, disciplines or programs. These spaces are managed and scheduled by their respective units or programs and are not included in the scope of this master plan.

III. RESPONSIBILITY FOR IMPLEMENTATION

At the University of Maryland, GPCs are campus-wide shared resources; consequentially there is a broad range of constituents for whom providing an intentionally composed inventory is absolutely essential. Planning and funding decisions for improving the conditions of these spaces are made by the Teaching Facilities Committee (TFC). Its membership consists in equal parts (approximately one third) from each of the following groups:

- | | |
|-----|--|
| 1/3 | Faculty from various colleges |
| 1/3 | Administrators from units such as the Division of Information Technology (DIT), Office of the Registrar, and the Teaching and Learning Transformation Center (TLTC) |
| 1/3 | Representatives from those organizations which support and maintain teaching facilities including Facilities Management and facilities representatives from the various colleges |

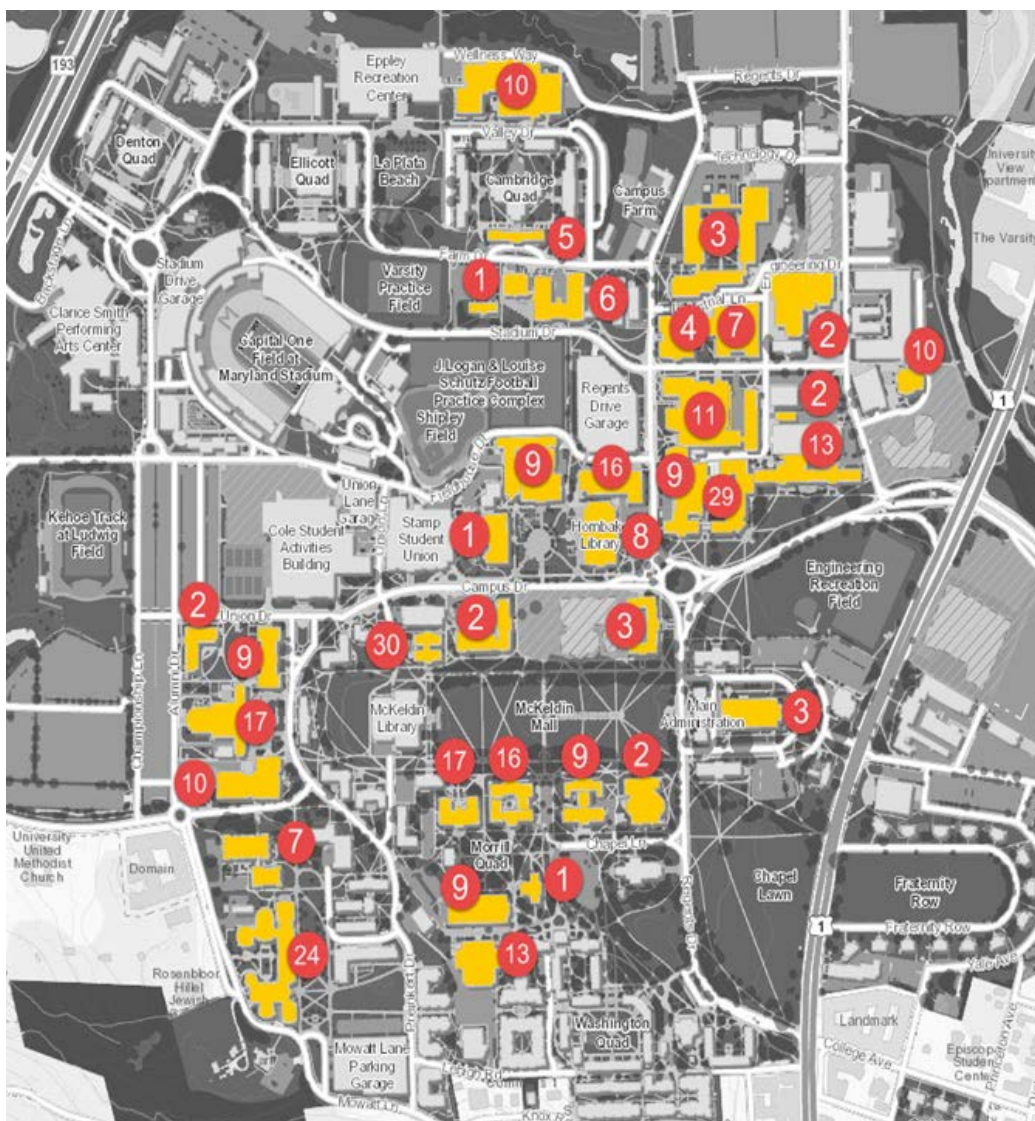
The TFC has been established on a foundation of collaboration across these many disciplines and it is this same philosophy that should guide future efforts to provide classroom environments that support a high quality teaching and learning experience “equal to the best”.

PART I: SUMMARY OF EXISTING CONDITIONS

1.1 THE CAMPUS

As of Spring 2016, there were 318 General Purpose Classrooms with a total of 19,225 seats, spanning 35 buildings and 279,288 nsaf on the College Park Campus. The classroom space deficit during the same period was 106,420 nsaf., calculated as 1.1 sf/weekly student contact hour per State of Maryland Space Planning Guidelines.

General Purpose Classroom Locations (Figure 1.1)



Classroom Classification: Approximately 3% of the total assignable square footage on campus is classified as classroom space. 78% of this is General Purpose Classroom space, the primary focus of this Plan. The remaining 22% of this space is classified as “Departmental” classroom space which is managed by individual departments or units within the various colleges. Departmental classrooms are intended to be used as instructional spaces supporting credit-bearing courses as their primary function; however it appears from examination of scheduling records that many of these spaces are being significantly underutilized or not used at all for this intended purpose which poses two major concerns:

1. The space classifications for these rooms in University Inventory do not accurately reflect actual use.
2. As both Departmental and General Purpose Classrooms are counted in the overall Classroom Space reported to the State, the University is effectively stating that it has more classrooms than are actually in use for this purpose, which implies that the actual Classroom Space Deficit is probably much higher.

Classroom Types: Classroom Spaces at Maryland are categorized into four general types for inventory and scheduling purposes:

- | | |
|--------------------------------------|--|
| 1. SMALL GPC (Seminar) | generally 1-19 seats |
| 2. MID SIZE GPC | typically 20-80 seats |
| 3. LARGE GPC (Lecture) | usually 80+, mostly fixed seats |
| 4. ACTIVE LEARNING GPC (TERP) | can be in any of the previous categories but has specific features designed to support team-based learning |

1.2 THE INVENTORY

1.2.1 PROFILE OF INSTRUCTION

The overwhelming majority of Maryland's courses are small - 3,790 of 5,886 (64%) have fewer than 30 students and (20%) have fewer than 20 students.

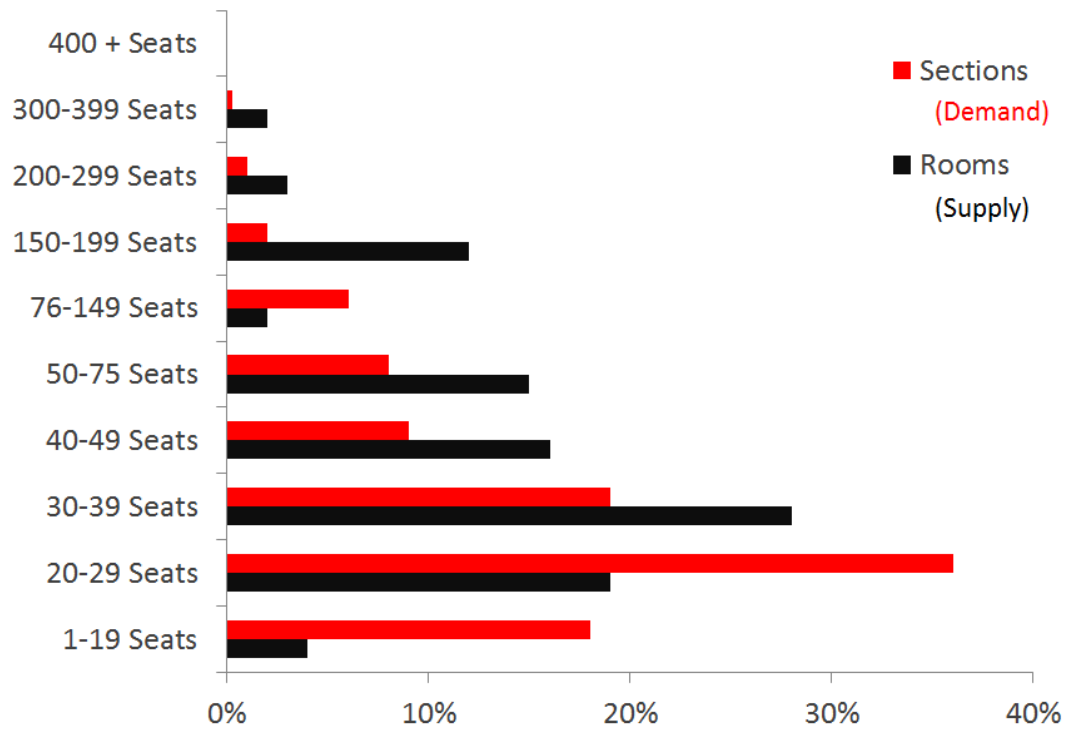
- The greatest concentrations of enrollments are at 1-19, 20-29, and 30-39 students.
- Classes with enrollments between 40-149 students represent a combined 14% of sections offered.
- There are 21 classes with enrollments greater than 200 students.
- While the majority of classes offered are small, there are a large number of student contact hours across the board, suggesting that attention to classroom spaces at all sizes is important.

1.2.2 ADEQUACY OF THE INVENTORY (SUPPLY VS. DEMAND)

By contrast, the number of classrooms sized at less than 30 seats accounts for only 23% of the classroom inventory. This imbalance causes a domino effect, often referred to as "seat migration" whereby smaller courses must be offered in larger rooms than needed across the board - i.e. a class enrolling at 23 students offered in a room with 60 seats would be viewed as having migrated considerably from an ideal size. This mismatch is reflected in seat utilization rates, which are consequently low.

The shortage of small rooms is exacerbated by the fact that the highest interest in offering classes is between the hours of 9am and 3pm (Prime Time).

SUPPLY VS. DEMAND

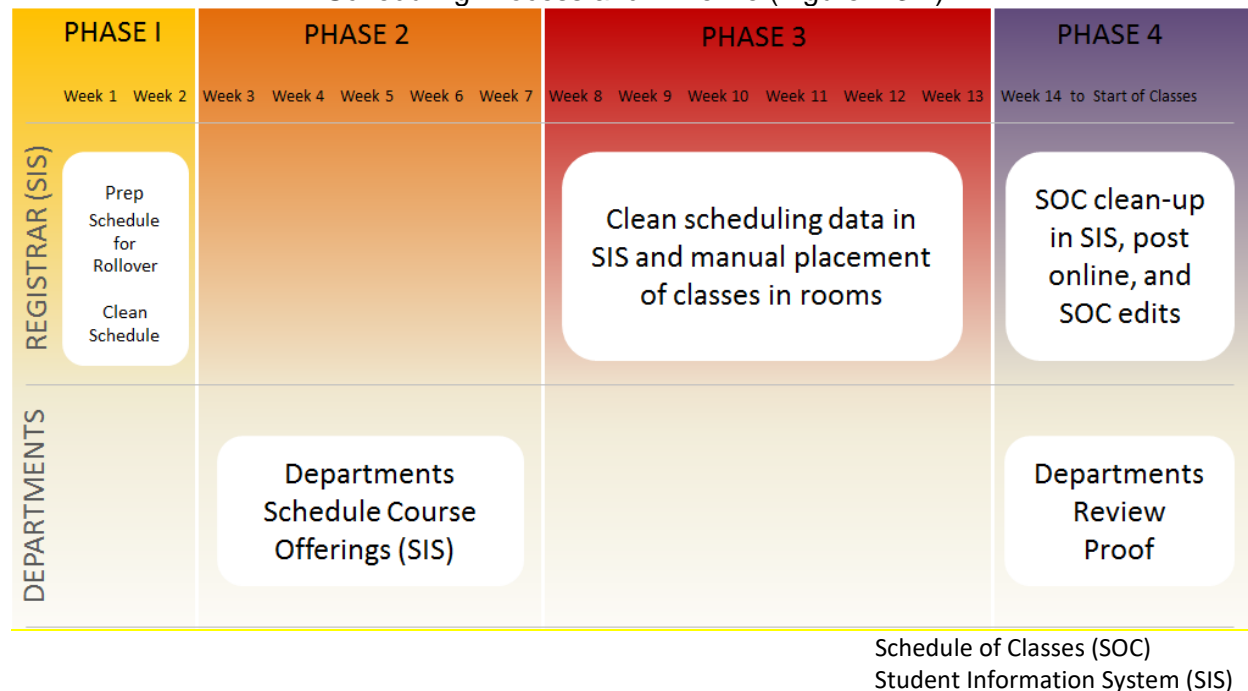


1.3 SCHEDULING

1.3.1 CURRENT PROCESS

Course and Classroom Scheduling currently operates under a distributed system where responsibility for entering course data is shared between individual departments and the Office of the Registrar, and is managed through various phases. Like semesters are rolled over and departments are given approximately 6 weeks to make updates to the schedule (including placing courses into classrooms for which they have priority and also scheduling departmental classrooms or lab rooms). After the department scheduling phase is complete, the Registrar's Office cleans-up data and locates classrooms for courses that have not yet been placed. During this time, the office may also make adjustments to room assignments the department has entered. From this point forward, the department must email all changes to the Registrar's Office to be processed manually.

Scheduling Process and Timeline (Figure 1.3.1)



In recent years, Course & Classroom Scheduling Services in the Office of the Registrar has been struggling with imposing the Meeting Times and Classroom Scheduling Guidelines.

Current scheduling difficulties include:

- Too many classes offered at non-standard times, constricting the use of space
- Offering patterns not abiding by the scheduling matrix guidelines, meaning course times continuing to be concentrated between 9:00 am and 3:00 pm and Fridays being avoided, creating bottlenecks in these “prime times”
- Instructor's preference for 75-minutes classes
- Inability to be flexible as program enrollments fluctuate
- Lack of smaller classrooms for which there is heavy demand
- Lack of larger classrooms for which there is an increasing demand

1.3.2 CLASSROOM SCHEDULING GUIDELINES

The University has engaged in various analysis on course and classroom scheduling between 1999 - 2004 resulting in the establishment of current guidelines as documented in the Office of the Registrar Online Scheduling Guide.

The following are the **Meeting Times Guidelines** established for classroom scheduling at the Institution:

Standard Class Times:

- *Spring and Fall standard class meeting times:*
 - *Monday/Wednesday/Friday: 50 minutes, beginning on the hour (e.g. 10:00 am - 10:50 am)*
 - *Tuesday /Thursday: 8:00 am - 9:15 am, 9:30 am - 10:45 am, 11:00 am - 12:15 pm, 12:30 pm - 1:45 pm, 2:00 pm - 3:15 pm, 3:30 pm - 4:45 pm*

Non-standard Class Times:

- *Any class meeting times other than those listed above (including classes that meet once a week) are considered non-standard and require approval for an exception. The Student Information System (SIS) will not accept non-standard times without prior approval. Justifications or approvals for nonstandard times from either the college office (for undergraduate courses) or the Department Chair/Program Director for graduate courses should be directed to schedule@umd.edu.*

Provost's Guidelines:

- *The Provost's guidelines for the distribution of class times are as follows:*
 - *No more than 70% scheduled on MWF*
 - *No more than 45% scheduled on TTh*
 - *At least 20% scheduled before 9:00 am and after 3:00 pm*

The following are the **Classroom Scheduling Guidelines** established for classroom scheduling at the Institution:

Space on campus dwindles while space demands increase. The following guidelines will enable Course & Classroom Scheduling Services in the Office of the Registrar to increase space efficiencies, better addressing the disparity between supply and demand. Establishing guidelines allows us the tools necessary to effect change where needed for the overall good.

Classroom Utilization Goals:

- *Room Use - an overall room use rate of 67% or higher, as required by the State of Maryland, not to exceed 80%.*
- *Seat Fill - Initial classroom assignments are made based on projected and historic enrollment. Classes where seats offered are less than 80% of room capacity may be moved to a smaller room with equivalent technology if necessary to accommodate a larger class. The Office of the Registrar will consult with the Department prior to such a move.*

Non-Standard Times:

- *Classes that meet using standard time patterns will be given priority over those using non-standard patterns (i.e. all standard classes scheduled first pass, then non-standard). Specialized pedagogical needs will be given consideration as far as is possible without compromising the overall academic schedule. The Office of the Registrar will work closely with academic departments to achieve best practice.*

Standard times are defined as:

- *MWF - 50 minutes, on the hour, beginning at 8:00 am*
- *TTh - 75 minutes, 15 minute break between classes, beginning at 8:00 am*
- *Two or more upper level major courses may be offered at non-standard times if scheduled in such a way that they equal a standard time. Consideration should be given to how such an arrangement might impact the final exam schedule (e.g. T 9:30 am - 12 pm and H 9:30 am - 12:00 pm = TTh 9:30 am - 10:45 am and TTh 11:00 am - 12:15 pm)*
- *Any other class meeting pattern is considered non-standard and requires a written (e-mail) request for exception approved by your College office (undergraduate), or Graduate Chair/Program Director (graduate).*
- *Classes requesting non-standard times are encouraged to use Departmental rooms first if they are available and to be scheduled outside peak hours (i.e. after 2:00 pm). Classes using a one-day-only pattern and meeting for more than normal duration (e.g three-hour seminars, etc) should be scheduled in non-prime time, especially on Fridays.*

Priority Agreements:

- *Priority agreements will be reviewed every three years, and updated if appropriate. Departments are expected to adhere to the scheduling guidelines outlined above (i.e. room utilization, seat fill, and class spread).*

In Spring 2016, a Course and Classroom Scheduling Study reviewed scheduling challenges and their impact on classroom space and student retention and graduation. Since the current scheduling guidelines posed significant limitations that could risk confusing the analysis, the team considered the need for clear and consistent descriptions to standardize the research.

- **“Standard”** Scheduling Patterns -- *the team agreed that this definition would be used for courses that:*
 - Have only one class meeting per day;
 - Contain only lecture and discussion meetings; AND
 - Contain either MWF 50-minute meetings that start on the hours from 8:00 am to 4:00 pm or TTh 75-minute meetings beginning at 8:00 am, 9:30 am, 11:00 am, 12:30 pm, 2:00 pm or 3:30pm.
- **“Non-Standard”** Scheduling Patterns -- *the team agreed that this definition would be used for courses that:*
 - Have start and end times that are not the same across all meetings of the course;
 - Contain only lecture and discussions meetings;
 - Begin at 8:00 am or later, and end before 5:00 pm; AND
 - Do not meet the “Standard” scheduling pattern
- **“Neither”** Scheduling Patterns -- *the team agreed that this definition would be used for courses that could not conform to either the ‘Standard’ of the ‘Non-Standard’ patterns because the courses either:*
 - Have more than, or less than 3-credit hours (including courses with labs and experiential components);
 - Have course numbers of 500 and higher;
 - Have laboratory, or experiential components;
 - Begin before 8:00 am or after 4:00 pm OR
 - Have “TBA” meeting times (e.g. individual study, and purely online courses)

Using this definition, the following breakdown of course offerings is shown below to highlight the challenges.

Section Analysis - SPRING 2016							
Spring 2016 - Totals							
Standard Sections		1,351	27.63%				
Non-Standard Sections		1,656	33.87%				
Neither Sections		1,882	38.49%				
Total Class Sections		4,889	100.00%				
Provost's Guidelines							
		Standard	Non-Standard	Neither	Total		
No more than 70% scheduled on MWF	Actual:	9.29%	8.41%	7.90%	25.59%		
No more than 45% scheduled on T-Th	Actual:	17.84%	8.49%	11.43%	37.76%		
		Standard	Non-Standard	Neither	Total		
At least 20% scheduled before 9am	Actual:	0.80%	0.88%	1.62%	3.29%		
At least 20% scheduled after 3pm	Actual:	1.80%	5.54%	10.33%	17.67%		
	Total:	2.60%	6.42%	11.95%	20.97%		
Spring 2016 - Standard Meeting Patterns							
Meeting Pattern	Mins	Sections	Percent				
TH	75	876	17.92%				
MWF	50	475	9.72%				
Total		1,351	27.63%				
Spring 2016 - Top 5 Non-Standard Meeting Patterns							
Meeting Pattern	Mins	Sections	Percent				
MW	75	271	5.54%				
MWF	50	192	3.93%				
THF	50, 75	69	1.41%				
MWF	50, 75	62	1.27%				
MTH	50, 75	61	1.25%				
All Other Non-Standard Patterns*	Various	1,001	20.47%	*There are 115 additional non-standard patterns with section counts from 1 to 60.			
Total		1,656	33.87%				

1.4 PHYSICAL SPACE

1.4.1 CONDITION ASSESSMENT:

Lighting: While new and recently renovated classrooms have installed 2'x2' LED fixtures with addressable drivers for seamless integration with controls, there remains a wide variation in type, quality, layout, and controls of classroom lighting across campus. Many rooms (36% of inventory) include fixtures/lamps that are not energy efficient resulting in higher operating costs.

Flooring: Wide variation in material, size, and quality of installation across the inventory. Upon inspection, 27% of classrooms were noted as less than adequate in the category of floorcovering type and condition.

Heating and Air Conditioning: 94% of faculty surveyed cited good heating and air conditioning as being Very Important to Critical in the classroom environment. Comments include poor performance, lack of control, excessive noise and encroachment on student seating area.

There are a number of buildings on campus for which HVAC system upgrades have fallen into the category of “deferred maintenance” as project complexity, budget concerns, and coordination issues prevent much of this work from moving forward. The impact of these issues will require additional study of maintenance requests, system performance, and user experience data to develop a plan to prioritize areas of need in alignment with other campus infrastructure upgrades.

Acoustics: At the time of this writing, there are no existing standards for control of overall ambient noise in classrooms or mitigation of sound transmission between rooms. This results in a wide variety of soundproofing installations in terms of quality, effectiveness, and aesthetic appeal.

Power: Power is available at all student seats in 8% of the General Purpose Classrooms, while 76% have three or fewer power outlets accessible to students. While the number of students working with laptops, tablets, or other devices in class continues to rise, there is no existing guideline or strategy to address student need for electrical power.

Boards/Screens: Instructor writing and projection surfaces vary greatly across campus (i.e. chalkboards, whiteboards, glass boards, projection screens/walls) as there is no existing guideline governing what product/method is appropriate in each situation. Consequently, those units supporting the current classroom inventory report a number of recurring issues including: screens covering primary instruction board while in use, inability of students to adequately view content presented, health/allergen concerns, outdated mechanical components which are costly to repair, and lack of compatibility with current technology.

Furnishings: There are currently two broad categories of furnishings in the General Purpose Classrooms: Loose Furniture (can be tablet-arm chairs, or tables and chairs)

and Fixed Furniture (can also be tablet-arm chairs, or tables and chairs). As these types have been applied across the inventory over many decades, the result is a mix of furnishing types, styles, and colors which not only present a host of maintenance concerns but may or may not be appropriate to support the pedagogies employed in each classroom.

“Overfurnishing”: One of the most significant problems is that, in many cases, the number of seats in a room is excessive based on modern furnishing standard which are designed to accommodate today’s larger seats, better circulation and accessibility as well as increased use of technology. In a large number of rooms, the square footage allowance per seat is below or well-below modern standards, 31% of which occurs in rooms seating 40 or fewer.

Table 1.4.1

Contrasts the existing square foot per seat range found in the GPC inventory with modern square footage allowances designed to accommodate today’s larger seats, better circulation and accessibility as well as increased use of technology.

Room Type	Current SF range	Modern SF
Seminar (Small)	14-29 sf	20 sf
GPC (Mid-Size)	10-27 sf	18-20 sf
Lecture (Large)	7-21 sf	16 sf
TERP (Active Learning)	23-25 sf	23 - 25 sf

Accessibility: To date, the University of Maryland has been able to accommodate ADA requirements by supplementing existing furnishings with temporary ones to address accessibility needs in addition to moving courses to more appropriate classrooms as required. Though significant progress has been made, there remain a number of General Purpose Classrooms in inventory that do not meet ADA guidelines, mainly in the category of accessibility to and from the primary instruction space.

1. 4.2 CLASSROOM MAINTENANCE

Organizational Structure: The Office of Classroom Maintenance operates as part of the Department of Building & Landscape Maintenance within Facilities Management. It is overseen by an Assistant Manager and staffed with two 2- shift maintenance mechanics and two third shift reflex engineering techs. Three critical positions have remained empty for some time, limiting the frequency of classroom inspections which results in longer response time to resolve repair issues and delay or outsourcing of classroom-specific cleaning tasks not captured within the duties of the day-to-day general housekeeping staff.

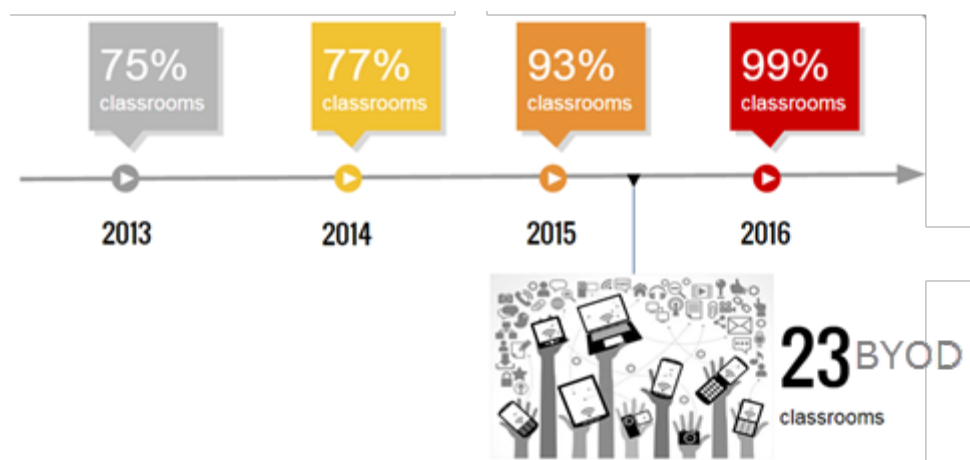
Multiple Furniture and Finish types to be maintained: Aging furnishings in many classrooms, especially where fixed seating is installed. Products installed over 20 years ago are most often discontinued and manufacturers charge increased prices, sometimes double, to remanufacture the discontinued parts when these can be located. Such a wide variety of furnishings and finish types necessitates that replacement materials be stored on hand for use in repair/replacement efforts making it impossible to represent each in the limited space designated for this purpose.

1.5 TECHNOLOGY

1.5.1 TECHNOLOGY CLASSROOM AVAILABILITY

In 2013 only 75% of the GPCs had A/V equipment installed. As shown in Figure 1.5.1, the AV availability in GPCs has significantly improved over the past several years. Starting in the Fall of 2016, instructor access to AV in classrooms was expanded by the adoption of a different design approach: bring your own device (BYOD). This approach has been applied in additional 23 GPC's making AV available in 99% of classrooms on campus.

AV Availability Timeline (Figure 1.5.1)



1.5.2 AV CLASSROOM PLANNING

When the University has historically installed hardware and software in the classroom as part of a new construction or renovation project, it has often been done without factoring in the costs to support the equipment and infrastructure over time. As a result, there is often a lack of sufficient support to maintain, repair and improve performance of the equipment, as well as a lack of staff for training faculty, staff, and students. This inevitably creates delays, inefficiencies and great deal of user frustration.

From a classroom planning perspective, the initial cost of technology is only a portion of total cost of ownership. All of the following factors should be included if the goal is to plan a stable, secure and modern IT infrastructure for classrooms:

- Hardware and software upgrade
- System and network technical support
- Design Expert/consultants
- Classroom Helpdesk support
- Usability tests
- Documentation development
- Training of users
- Project Management
- Infrastructure support needs/costs

1.5.3 TECHNOLOGY SYSTEMS AND SERVICES

The multitude of specialized systems of classroom technology have posed some unique challenges such as:

- a) all instructors do not teach in the same way and need different types of technologies to support their pedagogies;
- b) Some instructors are resistant to change and do not keep themselves abreast of new and emerging technologies. As a result, there are many examples of overly complex technology environments that are not user-friendly and can effectively hinder the instructor and student experience. Furthermore, based on self-reported data, there are a number of instructors (approximately 215) who continue to rely on outdated equipment, some of which (overhead transparency projectors and VCRs) are no longer available in the market.

1.5.4 NETWORK INFRASTRUCTURE

Over the past year, the Division of IT has reported a surge of 15% (or 10,000) more devices connecting to UMD's wireless network. This is a significant increase from years past and is a contributing factor to unreliable access to network access inside classrooms and the recent Wi-fi outages on campus. Overall, when planning for classroom technology upgrades, the expansion of the network infrastructure is not necessarily included. Planning must include the ability to support a typical student who connects 3-4 devices to the network while taking a course in a given classroom. This is crucial to support pedagogical goals, including the use of mobile wireless devices for interactive classroom response activities, doing computer-based activities in class, and taking quizzes and exams on computers in class.

1.5.5 CLASSROOM TECHNOLOGY SUPPORT

The Division of Information Technology (DIT) is the unit responsible for designing, installing, maintaining and supporting the technology available in all GPCs. The DIT service desk team is composed of staff and student employees that provide immediate on-call assistance. The A/V and network support team works on installing, replacing, and fixing the equipment as technical incidents are escalated by the service desk. The team also provides training, orientations and consultations as needed to the broader campus.

Presently, GPCs are supported in an inconsistent and scattered way. In addition to the central classroom support office, some academic units such as, BSOS, ARHU, ENGR and BGMT have their own local support offices. Although helpful, the local offices provide a limited scope of support, do not cover after 5pm for immediate assistance and do not cover all buildings and, in some cases, all instructors. These groups operate with their own protocols and limited communication with the central support office. This has been the source of confusion, frustration and delay in response time on the part of many instructors. For instance, if there is a problem with the A/V in a particular classroom, the instructor often does not know who to call for classroom support as this can change based on the time of day and location.

The Classroom Technology support team seeks to assist all UMD instructors with their technical needs so that their class sessions progress smoothly and uninterrupted. However, due to the lack of a headquarters with a classroom operations center and consistent hours of support, the central office is not aware of and is often unable to provide immediate and full support.

1.5.6 RESOURCE STEWARDSHIP

DIT repurposes and recycles classroom technology equipment on a 4- to 8-year cycle based on equipment warranty as well as technology incidents/failures. Older equipment that is still functional is often “passed down” to other units or users who can still make use of these items. Useable parts of nonfunctional equipment are salvaged by technicians for maintenance and repairs. However, due to the lack of updated standards and guidelines to design and build A/V systems, it is difficult to remove outdated equipment from classrooms and reconcile outdated technology guidelines with contemporary needs for the design of physical spaces.

1.6 MANAGEMENT

1.6.1 GOVERNANCE

in 1984, the Teaching Facilities Committee (TFC) was appointed by the Provost to develop a program for improving the conditions of the University's teaching facilities. Its membership consists of representatives from colleges as well as from those organizations that support and maintain teaching facilities.

Current Shortcomings:

- Guidelines: No existing guidelines for TFC membership composition
- Representation: Faculty are historically under-represented
- Communication:
 - No formal vehicle/s by which issues related to scheduling, technology, and pedagogy are reviewed and brought to TFC for discussion.
 - No regular method by which progress toward stated goals is reported to the larger community.
- Metrics: No formally established metrics are regularly evaluated to determine the status of progress toward stated goals.
- Tools: No existing tool/process for collecting information regarding the student experience in GPCs.

1.6.2 PLANNING

The term "Planning" takes two distinct forms as it relates to classrooms at UMD, the first is related to Classroom Design and the second, Classroom Use.

Classroom Design: The Office of the Provost, Facilities Management, and Division of IT work together with faculty and administrators to make decisions related to the location, sizing, and specific design of classroom space on a per-project basis. Though these groups work well toward their shared goal, there are several areas in which the current process might be improved.

Current Shortcomings:

- Standards: Classroom Design Standards, including AV standards are outdated and do not reflect current best practices.
- Pedagogy: No explicit focus on pedagogical goals with analysis of the scholarly literature is incorporated into planning.
- Process: Existing process to coordinate oversight of day-to-day classroom planning and operation issues and elevate major issues to TFC for discussion is not formalized.

- Tools: The current tool for UMD community to submit requests for classroom upgrades is being phased out, effectively severing an important line of communication between planners and classroom users.
- New Construction: The existing process for determining classroom classification (GPC/Department), size, and type occurs independently from TFC and the Office of the Registrar resulting in missed opportunity and lack of clarity in early decision making.
- Renovations: No existing guidelines for prioritization of classroom upgrade projects.

Classroom Use: The Office of the Registrar and the Teaching and Learning Transformation Center share the primary responsibility of planning for day to day use of classrooms to support the instructional needs of the campus. Opportunities to improve usage planning exist in a number of categories.

Current Shortcomings:

- Tools: Continued reliance on an outdated and cumbersome student information system limits the extent to which new scheduling tools can be deployed and inform decision-making.
- Policies: No existing policies governing room use, seat fill, class spread, or scheduling patterns result in continued reliance on unenforceable guidelines and repeated non-conformance among distributed schedulers.
- Teaching styles: Data collected from instructors in the annual survey is limited with regard to teaching styles and preferences, resulting in insufficient data to inform decision making.

1.6.3 OPERATIONS

The day-to-day operations of classroom spaces at Maryland are managed by three primary groups:

1. Office of the Registrar- Course and Classroom Scheduling
2. Facilities Management - Classroom Maintenance and Housekeeping
3. Division of IT - Academic Technology: Tech Support, Break and Fix

The tools and processes employed by these groups will require thoughtful revision in order to bring them into alignment with current institutional goals.

Current Shortcomings:

- Information: Multiple classroom inventories are maintained by various offices requiring regular coordination and only limited information being accessible to select members of the campus community.
- Tools: Mismatch of outdated and new scheduling tools results in processes that are often manual, duplicated, and otherwise inhibited.
- Support: Existing scattered technology support structure results in inconsistent quality of user experiences, confusion, and delay.
- Flexibility: Current process for funding support staff positions related to classrooms does not have a direct relationship to the changing size of the classroom inventory.
- Cost Recovery: There is no university-wide policy for cost recovery when instructional spaces are used for non-academic events, addressing charges for room usage, technologies, and clean-up.

1.6.4 EMERGENCY PREPAREDNESS

There are some issues common to all classroom spaces regardless of their classification as “general purpose” or “departmental”. These relate primarily to security and emergency preparedness. Security considerations in buildings with classrooms are arguably no different, regardless of who manages them - they still must be patrolled, secured after hours, etc. More importantly, as earthquakes and other serious disasters have demonstrated, in times of emergency it is imperative to know where classes are being held so that students can be located and emergency planning measures can be implemented.

Current Shortcomings:

- Systems: Not all spaces designated as classrooms are scheduled in SIS
- Policies: No existing policies and procedures with regard to classroom security and emergency preparedness
- Communication: No established path of communication to/from classroom users in preparation for or in times of emergency

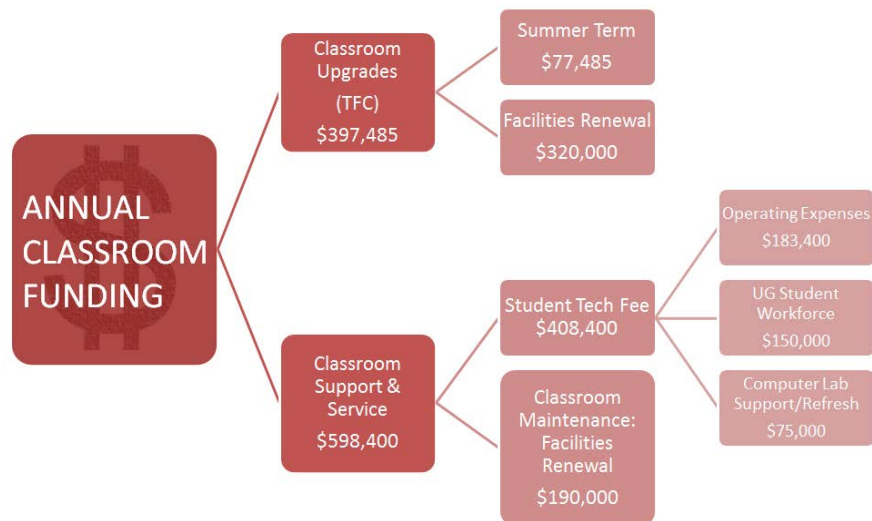
1.6.5 FUNDING & BUDGET

Funding: There are currently several funding sources related to General Purpose Classroom spaces, categorized as follows:

- Classroom Upgrade Funds
 - *TFC budget*: \$397,485 per year. This includes \$77,485 from Summer Term income, and \$320,000 from Facilities Renewal funds.
- Classroom Maintenance
 - (*Finishes and Furnishings*) Approximately \$190,000 of Facilities Renewal funds annually; used to support repair and ongoing maintenance in all GPCs.
- Classroom Technology
 - Student Tech Fee*: \$408,400 per year used to support operating expenses, undergraduate student workforce, and computer lab support/refresh efforts.

It is important to note that though Facilities Renewal dollars account for the single largest source of classroom funding annually, the past fifteen years have seen only a 0.6% increase in the Instructional Facilities allocation despite a 24% increase in the total Facilities Renewal Budget during the same period.

Classroom Funding Structure (Figure 1.6.5A)



Budget: Leaving aside the funds the undergraduate student workforce, which are operational in nature, total funding for annual maintenance, upgrades, and technology is approximately \$845,885 per year. This equates, on a “per unit” basis, as follows:

- Per room (318 rooms): \$2,660
- Per gross square foot (279,288 gsf): \$3.02

Viewed in a life cycle approach, with a general classroom refurbishment cycle of 10 years, funding availability on a per room basis is as follows:

- 318 rooms over 10 years equals 32 rooms per year
- Maintenance, Upgrade, and technology funds per year: \$845,885
- Funding per room per year (32 rooms per year): \$26,400

Average funding based on other replacement cycles (10-20 years) is shown in the chart below.

Refurbishment Funding for GPCs (Table 1.6.5B)

Refurbishment Funding for GPCs		318 rooms
Refurbishment Cycle	No. of Rooms Refurbished per Year	Funding Available Per Room Per Year
10 years	32	\$26,400
12 years	27	\$31,300
15 years	22	\$38,450
20 years	16	\$52,868

*Note: all figures in this section are expressed in 2016 dollars.

The 2016 Strategic Plan Update states that “to transform the student experience, UMD needs to accelerate renovations and create modern, flexible, and collaborative environments throughout campus in support of high-quality student-faculty interactions.” The pace of this acceleration will depend largely on funding. As a point of reference, actual costs based on recent project data, contrasted with the total funding currently allocated for classroom improvements show that the current budget will not be adequate to support an accelerated pace.

- *Refurbishing existing spaces:* \$80 per square foot

Changes primarily “cosmetic” in nature such as new finishes, fixtures, furnishings, and upgraded lighting. Refurbishing does not address structural changes or major systems/building infrastructure needs such as heating, ventilation, and air conditioning.

- *Substantial renovation:* \$175 per square foot

Changes include all those listed in “Refurbishing existing spaces” above as well as significant changes in room configuration and heavy infrastructure systems work (modernization or replacement of HVAC systems, electrical service, etc.)

GPC Upgrade Costs (Table 1.6.5C)

Classroom Upgrade Costs		
Room Size	Scope	Cost
Small	Refurbishing	\$17,000-\$29,000
	Substantial Renovation	\$38,000-\$64,000
	Classroom Technology	\$3200-\$5000
Medium	Refurbishing	\$29000-\$69,000
	Substantial Renovation	\$64,000-\$151,000
	Classroom Technology	\$5000-\$13,500
Large	Refurbishing	\$69,000-\$324,000
	Substantial Renovation	\$151,000-\$708,000
	Classroom Technology	\$13,500-\$25,000

II. THE GENERAL PURPOSE CLASSROOM MASTER PLAN

2.1.1 GUIDING PRINCIPLES

Guiding principles represent the core values, goals, and aspirations for all general purpose classrooms at the University of Maryland. The establishment of these principles is critical to provide the foundation for future decision-making as it relates to governance, planning and, operations for General Purpose Classrooms.

The 8 Guiding Principles

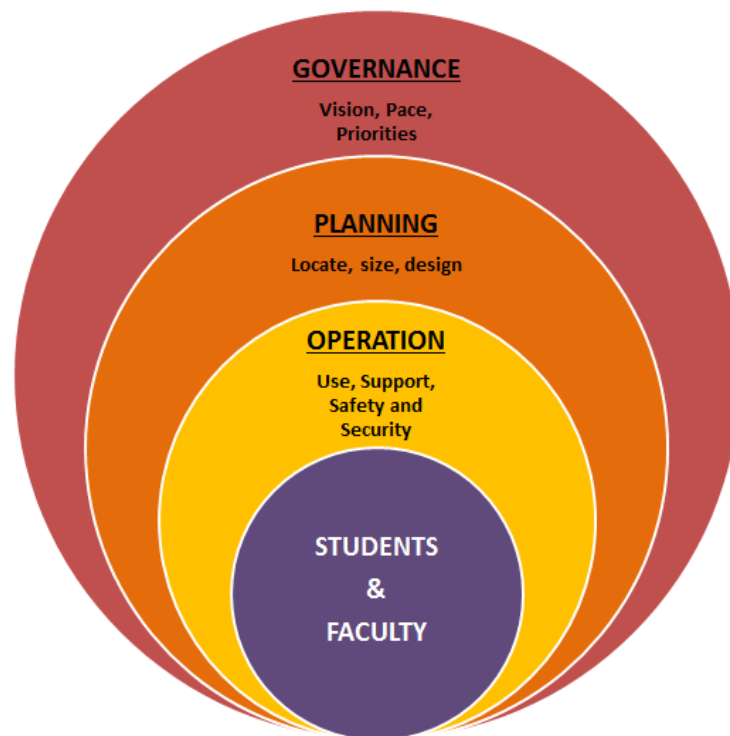
1. Environmental Quality - *Students have a fundamental right to an inspiring, accessible learning environment that is physically comfortable and allows them to clearly recognize the material as it is presented.*
2. Pedagogy - *A range of space configurations shall provide support for evidence-based practices to facilitate learning, and support diverse pedagogical approaches.*
3. Planning and Design - *Appropriate distribution of varying classroom spaces across campus shall serve the academic disciplines residing in each region of campus.*
4. Tools and Technology - *Current and progressive technologies are foundational to support learning activities, enhance communication, and enable the distributed interactivity anticipated for the classroom.*
5. Scheduling - *Every effort is made to ensure that classrooms are assigned fairly, used appropriately, and managed efficiently to accommodate the University's academic and instructional needs.*
6. Support and Operations - *We strive to prevent unnecessary loss of class time by providing timely resolution to applicable technological and facilities issues as they arise.*
7. Community Engagement - *Regular feedback from instructors and students and community engagement is key to seizing new opportunities for classroom enhancements and improvements of support services.*
8. Sustainability - *The University adopts environmentally sensitive and sustainable approaches in constructing, operating, and fitting out General Purpose Classrooms.*

2.1.2 THREE ELEMENTS OF THE MASTER PLAN

- I. **Governance:** Provides the vision, pace, and priorities on issues involving general purpose classrooms.
- II. **Planning:** Defines strategic policies and long-term planning considerations as well as the activities and guidelines necessary to locate, size, design, produce, and maintain an inventory of high quality general purpose classrooms.
- III. **Operation:** Addresses issues, activities and policy enforcement required for day-to-day support services of general purpose classrooms.

The tiered structure of these elements helps to drive strategic initiatives from a high level to an operational level to be realized. It is important to note that at the heart of any work within these three areas of focus must be the institution's responsibility to the students and faculty who will use the classroom spaces each day.

Elements of the Master Plan (Figure 2.1.2)



These elements are described in detail on the following pages.

2.2 GOVERNANCE

2.2.1 MANAGEMENT STRUCTURE

- **Recommendation: Strategic Management Structure**

TFC:

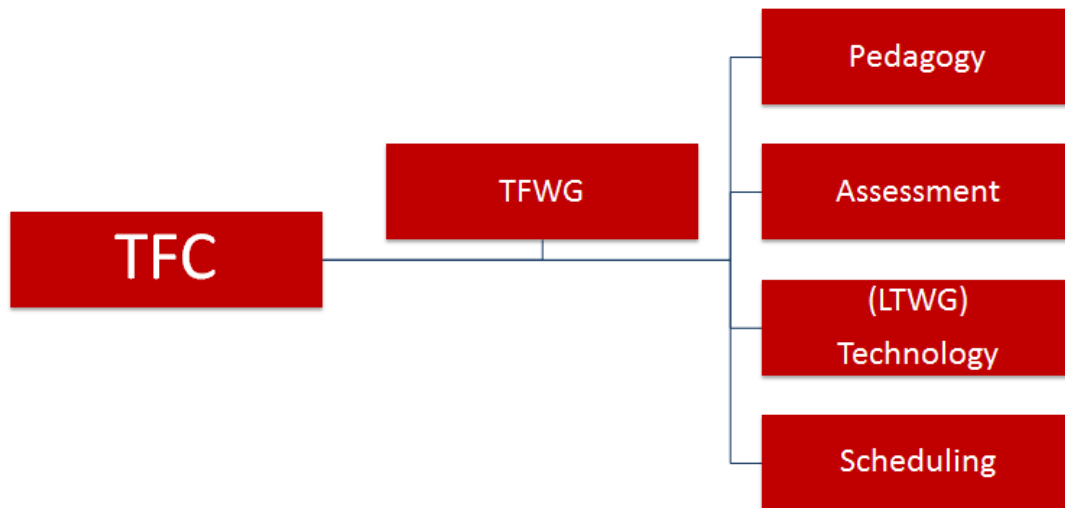
The Teaching Facilities Committee (TFC) is an administrative committee which should consist, approximately in thirds of members from the following groups: faculty, administrators, and facilities representatives. TFC is responsible for the vision setting, pace, and prioritization of initiatives related to all aspects of general purpose classroom spaces - pedagogy, physical environment, scheduling, technology, management and operation. This committee addresses issues that are long-term and strategic in nature, such as the following:

- Evaluation of the composition, condition, and distribution of the GPC inventory to support current instructional needs and institutional goals.
- Establishing Classroom Design Standards to reflect current best practices, updating as necessary
- Regular review of performance metrics to track progress toward goals
- Review of classroom-related "best practices" at peer institutions and nationally
- Review GPC space and technology needs which require funding; determine resource allocation
- Communication of an "Annual State of the General Purpose Classrooms" report to highlight progress that has been made during the year toward goals of creating new or renovated facilities, meeting performance metrics, etc.
- Oversight of the implementation of the General Purpose Classroom Master Plan to ensure that changes to classroom spaces and the inventory as a whole are in accordance with the plan, as well as refinements to the Plan every five years.

In addition to these ongoing duties, there are two recommendations which TFC should seek to undertake within Year 1 of Plan implementation:

- **Recommendation:**
Classroom Condition Upgrade Program -Implement a Classroom Condition Upgrade Program and timeline with the necessary funding to improve the physical conditions of the GPC inventory to align with best practices by 2022. These efforts should be integrated and balanced with efforts to both right size and balance the classroom inventory in each region of campus.
- **Recommendation:**
Departmental Classroom Survey -Conduct a physical survey of all Departmental Classrooms to determine actual use and reclassify/reassign as required.

Management Structure (Figure 2.1.1)



TFWG:

Over the past few years, the Teaching Facility Working Group (TFWG) has been established to coordinate issues impacting classrooms across the various operational groups responsible for the daily support services of these spaces. This team is comprised of members from the Provost's Office, Registrar's Office, Division of IT, and Facilities Management and meets biweekly to respond to requests from the campus community, coordinate project planning, and identify issues for elevation to the TFC for discussion. A goal of the Master Plan is to formalize this team and process of regular coordination as a vital part of the management of the GPC spaces.

LTWG -Technology Subcommittee:

Rationale:

Current and progressive technologies are foundational to support learning activities, enhance communication, and enable the distributed interactivity anticipated for the classroom.

Function and Composition:

The technology planning subcommittee will drive recommendations to add, upgrade, or decommission technologies in GPCs. This group works by:

- Keeping abreast of best practices at peer institutions to ensure Maryland's continued competitiveness.
- Identifying the user testing, staffing and training implications of new technologies and outlining strategies to provide these.
- Ascertain funding requirements for any proposed timeline associated with the introduction of technology enhancement initiatives.

It provides guidance to the Teaching Facilities Committee in the form of recommendations and prioritizations for technology of GPCs to support pedagogy.

In order to provide broader academic input with regard to GPC's technology capabilities and service offerings, the existing Learning Technology Working Group (LTWG) will serve to advise TFC on technology planning issues. This DIT group, commissioned by the Senate's IT Council, is charged to establish vision, priorities and pace related to overall campus learning technologies. The LTWG is composed by members nominated by the Deans of various colleges and meets 3-4 times per semester for 90 minutes.

Scheduling Subcommittee:

Rationale

Guiding Principle 5 states that *“every effort is made to ensure that classrooms are assigned fairly, used appropriately, and managed efficiently to accommodate the University's academic and instructional needs.”* Achieving best use of classroom space requires scheduling information that is both reliable and comprehensive. Obtaining a coherent understanding of how these spaces are used across the campus, and where there may be opportunities for better stewardship of these resources is extremely challenging with the current set of information management systems. In order to manage space effectively, classroom space use policies will need to be created that support our institutional priorities.

Objectives:

- Develop proposed policies to address scheduling patterns, room use, seat fill for adoption by Campus
- Engage in ongoing review of scheduling protocols and grids
- Move the institution toward a single, unified system for recording classroom information and scheduling data
- Work with TFC to establish criteria for assigning priority room scheduling
- Remain informed as to current best practices and tools for use in classroom scheduling
- Identify other issues related to GPCs as they arise for elevation to TFC for discussion

Pedagogy Subcommittee:

Rationale

Teaching facilities on campus, first, must support pedagogy. This group will drive the campus understanding of what is needed to support instructional excellence.

Function and Composition

The TFC Pedagogy Subcommittee's primary function is to specify the functional requirements that general purpose classrooms on campus must support. This group works by:

- studying what other institutions are doing in the BigTEN and elsewhere
- integrating knowledge of pedagogical theory into the decision making process
- working to design tools to assess what needs to be understood about how faculty currently teach in GPCs and evaluate and interpret this data for the TFC
- working with the Technology Planning subcommittee to help develop an understanding of how technologies can support these needs

It provides guidance to the Instructional Facilities Work Group in the form of recommendations and prioritizations for features of GPCs to support pedagogy.

The TFC Pedagogy Subcommittee consists of one faculty member from every college, a member of the Teaching and Learning Transformation Center, one undergraduate, and one graduate student. They meet 3-4 times per semester for one hour.

Assessment

Rationale:

Guiding Principle 7 states that *"constant feedback and community engagement is key to seizing new opportunities for classroom enhancements and improvements of support services."* Success in creating a classroom inventory that is intentionally composed to meet the needs of the campus will depend on regular review of performance metrics from multiple sources to inform decision making. This function will be performed collaboratively among the three other subcommittees and TFWG.

Performance Metrics

Because the classroom spaces are a valuable shared resource which directly impacts the quality of the learning and teaching experience, it is in Maryland's best interest to monitor the use of these spaces regularly to ensure that they are used wisely. Performance metrics provide an objective way to assess how these spaces are used.

- Physical Space-
 - CCI (Classroom Condition Index), updated annually
 - Square footage allocations (net assignable square feet per student)
 - Inventory Fitness and Distribution (Supply v. Demand)
- Space Usage-Room Utilization, Seat Utilization, Seat Migration , Meeting Patterns, Scheduling Effectiveness, etc.
- Pedagogy - Survey of trends in teaching styles and preferences (to be developed)
- User Experience-
 - Classroom Instructor Experience Survey
 - Student Classroom Experience Survey (to be developed)

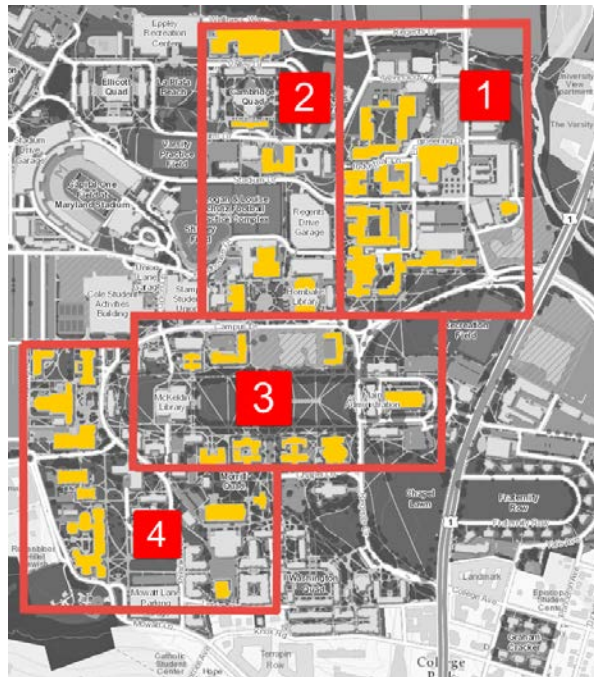
2.3. PLANNING

2.3.1 THE CAMPUS

For the purposes of this Master Plan, the campus has been divided into four regions to facilitate future planning with regard to distribution, use, service, and support of the GPC inventory. These boundaries have been chosen to reconcile existing classroom scheduling partitions as closely as possible with the campus district plan utilized by Facilities Management. Sharing this common language will help to align our planning efforts specific to general purpose classrooms and view them in the context of the larger campus as progress is made over time toward advancing our collective institutional goals.

4 Regions:

1. Northeast
2. North
3. Campus Mall
4. Southwest



2.3.2 SIZE AND DISTRIBUTION OF THE INVENTORY

The size and distribution of the classroom inventory required by the University of Maryland to meet the instructional needs of the campus will need to be continuously recalibrated in order to reconcile the issues of classroom supply vs. demand. Planning in this area is directly related to the following considerations:

- Geography- Proximity of Departmental Spaces to Classroom Spaces; influences the number and size of rooms needed.
- Scheduling- The degree to which courses can be scheduled during the full scheduling day; influences the number of rooms needed.
- Pedagogy- The nature of the pedagogies practiced; influences mix and composition of the inventory.

- **Recommendation** - Rebalance classroom distribution. As there is no specific formula to provide the single, correct number and distribution of classrooms in a particular sector of campus, the solution to this will be as much art as science. Using “supply vs. demand” as a starting point, planners should then overlay qualitative considerations to arrive at the appropriate distribution for each sector.

2.3.3 NEW OR RECLASSIFIED CLASSROOMS

Capital Project Programming: The planning process for capital projects begins with the preliminary programming of the total project space. It is at this time that a number of critical decisions are made including the size and location of potential classrooms and should be the time that the designation between General Purpose and Departmental Classrooms is made to inform decision making as the project progresses into the design and construction phase.

- **Recommendation:** The decision to classify as either a GPC or Departmental Classroom should be guided by an evaluation of the projected distribution of the classroom inventory relative to the demand for specific room sizes and types in the intended sector of campus. This evaluation process should include representatives from both the Office of the Registrar and TFC.

Departmental Classrooms: In determining whether the spaces should be designated as GPC or departmental classrooms, a review should be made of the classrooms assigned to the department/college and balanced against a concern for equitable distribution of departmental classroom spaces based on specialized need within that department (i.e. requirement for non-standard course times, specialized equipment, etc.)

- **Recommendation:** All departmental classroom assignments should be made at the College level and require the college to ensure that the minimum room utilization guidelines be met: 67% utilization between the hours of 8a-5p, Monday through Friday for credit-bearing courses scheduled in SIS in the Fall and Spring semesters. This agreement would remain in effect as long as the utilization goals are met, with the campus reserving the right to reclaim the space into the GPC inventory if they are not. This practice will ensure that classroom space is well utilized as intended so that the space inventory can most accurately reflect actual space use in order to guide future decision making.

2.3.4 CLASSROOM REMODELS

Classroom Project Prioritization: Opportunities to renovate or create classroom space will continue to be incorporated into new construction and building renovation projects and will be included in annual project planning cycles for summer and winter

upgrades. As plans are made to improve the base quality level of GPCs, right size, and ensure equitable distribution, a number of factors should be considered to determine project priority:

- Rooms requiring ADA enhancements to meet compliance guidelines
- Rooms where efforts to right size and/or balance the inventory distribution would better support campus needs
- Rooms impacting/or with the potential to a great number of students
- Rooms scoring very low on condition assessments
- Rooms not meeting current physical and technology design standards
- Rooms with low cost
- Pedagogical need (for example upon increased demand for TERP classrooms or for updated technology)
- Rooms in buildings with few updated classrooms
- Rooms in areas affected by other planned infrastructure upgrades which could benefit from a combined scope of work

Rightsizing Classroom Space : Where possible, the TFC has approved projects to rightsize classrooms to conform to modern square footage per seat allocations when this can be accomplished without sacrificing the ability of the Registrar's office to schedule the space needed to meet enrollment demands. There remain several concentrations of classroom around campus far in excess of these standards, where overcrowding limits safety, circulation, and general comfort for both students and faculty.

- **Recommendation:** The TFC should pursue a strategic course of inventory reshaping to include efforts both to right size and reconcile classroom supply and demand in the various sectors of campus to ensure accessibility and physically comfort in all classroom spaces.

Decommissioning Classroom Space: Despite all best efforts, some spaces currently designated as classrooms are simply not well suited to support teaching and learning or would be cost prohibitive to modify to become so.

- **Recommendation:** In these cases, the TFC should work to identify alternate space better suited to classroom use and to decommission and reclassify the classroom in question to serve an alternate space need on campus.

2.3.5 CLASSROOM DESIGN STANDARDS

Standards for Physical Classroom Space: The quality and fit-out of a classroom have an undeniable impact on the suitability and desirability of an individual space for teaching and learning. The highest quality spaces are understandably the most sought-after. Spaces with a backlog of deferred maintenance and inadequate conditions often can sit empty even during periods of high demand.

Standards for Classroom Technology: The ever-changing nature of classroom technology, coupled with the constant evolution of pedagogy will require the establishment of new classroom technology design standards to streamline system configurations and align instructional needs.

- **Recommendation:** Updated Design Standards for the Physical Classroom Space and the Classroom technology should be adopted and implemented within the next year and be regularly updated to reflect current best practices at University of Maryland thereafter. These should be written in such a way that they are matched to room type and pedagogy and should establish a baseline level of quality, so that over time, there is a consistent “Maryland classroom” look and feel that befitting the high caliber of our students and faculty.

ADA Accessibility: Though the University strives to ensure accessibility in its classroom spaces, it is acknowledged that further efforts are needed to achieve this goal.

- **Recommendation:** Conduct a study of ADA compliance in GPCs and incorporate results and recommendations into the master plan. Among the issues to be considered are:
 - Improving ADA accessibility signage
 - Guidelines for accessibility in tiered classrooms
 - Phasing and funding considerations and requirements for implementing changes to achieve ADA compliance.

2.4 OPERATION

2.4.1 CLASSROOM INFORMATION

Scheduling Tools: The mismatch of the existing outdated and new scheduling tools has resulted in processes that are often manual, duplicated and otherwise inhibited.

Information: At present, multiple classroom inventories are maintained by various offices requiring regular coordination and only limited information being accessible to select members of the campus community.

- **Recommendation:** Implement a move toward a single, unified system for scheduling information and data related to room features and use to be shared among all constituencies using GPC spaces through the online interface.

2.4.2 SERVICE AND SUPPORT

Support and Operations: As it exists currently, the existing scattered technology support offices across campus results in inconsistent quality of user experiences, confusion (who to call), and delays in responding to incidents reported to DIT. At the same time, departmental technology resources are overtaxed and unable to keep pace with demand for support of technology in an increasing number of academic spaces outside of the classroom, ie. Conference rooms, etc.

- **Recommendation:** Unify the GPC's instructional support on campus by creating a headquarters with a classroom operations center that will manage all incidents and strategically dispatch technicians to all sectors of campus in a reliable, efficient, and effective way.

Flexibility: In order to ensure adequate service and support our GPC spaces, staffing for these positions must have a direct relationship to the changing size of our classroom inventory.

- **Recommendation:** Reevaluate the type and number of necessary support positions before/after major changes in the classroom inventory to plan and provide for the appropriate staffing complement to maintain the level of service desired.

Cost Recovery: Community-wide events not related to academic use in GPCs should be governed by clear policies regarding cost recovery. There may be instances where the University may wish to provide space on a pro bono basis, such as a visiting outside speaker not tied to a specific academic purpose. Especially where these events are

revenue-generating, there should be a fee relative to the operating cost and staffing requirements to support it.

- **Recommendation:** Develop a fee schedule for use when GPCs are used for non-academic events (those events not connected to an academic program in some way), addressing charges for room usage, technologies, and clean-up as well as distribution of revenue.

2.4.3 EMERGENCY PREPAREDNESS:

Effective management of classroom space in times of emergency is among the most serious of the institution's responsibilities as it concerns the physical safety of the instructors and students using them at any given time. It is imperative that Maryland take steps BEFORE a life-threatening situation to prepare for the best possible outcomes.

- **Recommendation:**
 - ALL classroom spaces, GPC and Departmental should be scheduled in SIS so that students and faculty can be located in times of emergency.
 - Policy and procedures specific to classroom security and emergency preparedness should be adopted and disseminated.
 - A clear path of communication to/from classroom users in preparation for and in times of emergency should be established and utilized.

Acknowledgments

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