



## NEW YORK UNIVERSITY

A private university in the public service

### Office of the Executive Vice President

Elmer Holmes Bobst Library  
70 Washington Square South, 12<sup>th</sup> Floor  
New York, New York 10012-1091  
Telephone: 212 998 8015  
Facsimile: 212 995 4208

**Joseph P. Juliano** *Vice Provost and Associate Vice Chancellor for Strategic Planning*

## MEMORANDUM

To: University Space Priorities Working Group

From: Joe Juliano, Vice Provost and Associate Vice Chancellor for Strategic Planning

Date: January 25, 2013

Re: Response to your inquiries regarding classroom space

---

### Questions posted by the Working Group

- 1. What are the specific effects (both measurable and non-measurable) of increasing the classroom utilization rate during periods with unused capacity (e.g, Fridays, weekends, and early morning hours)?**
- 2. What further measures have been considered to improve the classroom utilization rate, and what effect would they have on the need for additional classrooms (e.g. reduction in classroom contact hours, increase in on-line instruction)?**

Before responding to this question, the Registrar feels it is important to reiterate Tom Hier's previous statement to the Working Group that the University's current level of classroom utilization is extraordinarily high compared to best practices. One illustration of the increased pressure we face with classroom inventory is that over the past ten years, undergraduate enrollments have risen from ca. 15,000 to over 22,000 students while graduate enrollments have risen from ca. 15,000 to over 18,000 students. Some of the former increase is accounted for in global sites but much of the increase has been experienced in New York. During the same period, the general classroom pool has remained steady at around 170 rooms.

This has resulted in unprecedented high utilization rates that led to one of the academic needs Provost McLaughlin highlighted to the Working Group as being decompression of the classroom schedule (60,000 GSF). As it stands, there are many time slots that are already scheduled at 90% utilization and above causing great difficulty from semester to semester to accommodate courses. This level of utilization provides little cushion or flexibility to adjust to changing circumstances including emergencies and barely affords adequate time to service and clean classrooms in between sessions.

One of the negative impacts of such high utilization is that courses wind up being scheduled in non-classroom and departmental spaces (such as faculty conference rooms) because an

insufficient number of rooms exist at particular time slots to fit all courses. This practice understates utilization rates and impinges on other University academic activities. The Registrar has long had the goal of utilizing 8AM and Fridays but for the purpose of decompressing the classroom schedule.

The answers below, therefore, should be understood as an analytical response to the Working Group's question and not an endorsement of any policy decision that increases classroom utilization. Moreover, it should be noted that analysis of classroom utilization, in order to be highly accurate, needs to be done based on classroom sizes and types (fixed seating lecture halls, seminar rooms, medium sized classrooms, etc.,). There was insufficient time to perform such a detailed analysis so the results below only provide a general sense of what can be achieved by changes to classroom scheduling and would need to be further studied in order to provide definitive results.

Classroom utilization is determined by the number of scheduled hours divided by the number of available hours to schedule. There are 170 general- purpose classrooms available to the Registrar to schedule resulting in a total of 7,437 available hours<sup>1</sup> during day-time (8AM to 4:45PM) periods Monday thru Friday.

For Spring 2013, 5,689 hours of classes are scheduled resulting in a 77% average weekly utilization rate. Fridays have a 36% utilization rate and 8AM has a 30% utilization rate. Conversely, average utilization for Monday thru Thursday for the remaining day-time periods average over 90%.

In order for changes in classroom scheduling to have an impact on classroom inventory, average weekly classroom utilization must increase from the current 76%. We have roughly estimated that every 10% increase in classroom utilization is equal to approximately 20 classrooms on average. Although a 90% average weekly utilization is not recommended, it should be considered the maximum that could be practically achieved. The impact of increasing classroom utilization from the current 76% to a maximum 90% is therefore roughly 28 classrooms.

Shifting more classes to Friday and 8AM would make it possible to increase average weekly classroom utilization. Increased use of Fridays and 8AM would decompress the portions of the schedule now scheduled at greater than 90% to absorb more courses.

The following example illustrates the impact. Each time slot provides 1,275 hours<sup>2</sup> of scheduling per week (Monday through Friday). 8AM is now scheduled at 30% utilization for approximately 380 hours. If 8AM could instead be scheduled at 80% utilization, 1,020 hours, then 640 hours would be gained in the schedule. The 640 hours gained could result in absorbing an increased number of courses or could allow a reduction in the classroom inventory. Since each classroom provides 35 hours of course scheduling per week at 80% utilization, the 640 hours gained could translate to 18 classrooms (640 hours gained/35 hours per week).

---

<sup>1</sup> 7,489 hours per day is derived from 8.75 hours per day X 5 days/week X 170 classrooms.

<sup>2</sup> 1,275 hours per day is determined as follows: 1.5 hour time slot X 5 days/week X 170 classrooms.

The increased use of Friday to increase average weekly utilization is much more complicated especially under a scenario that retains the current 5 day/75 minute grid. The current distribution of day-time scheduled course meeting patterns is as follows:

- 1 Day 32%
- 2 Day 44%
- 3 Day 16%
- 4 Day 6%
- 5 Day 2%

Interestingly, many of the 3 Day and 4 Day courses that could be scheduled on Fridays are scheduled in patterns that avoid Fridays. Changing these patterns could have a slight improvement to utilization rates. To use Friday maximally, a high percentage (40% of all hours scheduled Monday thru Thursday) of 1 Day courses would have to be shifted to Fridays. The impact would be as follows:

	Current		Model	
	Hours	Pct	Hours	Pct
Monday	301	17%	181	10%
Tuesday	317	18%	190	11%
Wednesday	324	19%	194	11%
Thursday	326	19%	196	11%
Friday	463	27%	970	56%
	1,731		1,731	

As one can see, we would go from a fairly even distribution to a very heavily weighted distribution on Friday. Even distribution of courses with multiple section offerings (Expository Writing, Foreign Languages, Recitations, etc.,) benefit scheduling flexibility for both students and instructional staff by being evenly distributed. As a result, it is anticipated that this level of change would engender a reduced level of scheduling flexibility.

To use Fridays maximally while retaining scheduling flexibility, the schedule would have to change to a MWF 3 day/50 minute grid and TR 2 day/75 minute grid. Even though this kind of schedule is typical in many schools, it is such a significant change to the pedagogy that would require a major reshaping of course offerings by a considerable number of faculty members (for example, half the 2 Day courses would need to become 3 Day courses) and a significant and long period of academic consideration by each school.

Although the Registrar does not support increased classroom utilization, there has been a concerted effort over the years in to increase scheduling at 8AM and on Fridays to relieve pressure on the classroom inventory and the non-classrooms spaces (including departmental conference and meeting spaces). Because a high percentage of students have part time jobs and are encouraged to participate in internships and extra-curricular activities, the Registrar's focus has not been on increased utilization outside the 8AM – 445PM day time hours or beyond Monday thru Friday.

As stated above, the Registrar has not been focused on increasing average weekly utilization rates, nor recommends doing so, but relieving pressure on the general purpose classroom pool. Right now, there are 170 general purpose classrooms as follows:

	Building	Rooms		
		No.	Pct.	Cumul. Pct
1	Silver Ctr for Arts & Sciences	31	18%	18%
2	25 West 4th Street	20	12%	30%
3	Bobst Library	18	11%	41%
4	Global Ctr for Acad / Spir Life / 238 Thompson	18	11%	51%
5	194 Mercer Street	17	10%	61%
6	Waverly Building	16	9%	71%
7	7 East 12th / Fairchild	15	9%	79%
8	Tisch Hall	13	8%	87%
9	12 Waverly Place	5	3%	90%
10	Meyer Hall	5	3%	93%
11	Paulette Goddard Hall	5	3%	96%
12	Cantor Film Center	3	2%	98%
13	19 West 4th Street	2	1%	99%
14	19 University Place	1	1%	99%
15	5 Washington Place	1	1%	100%
<b>Total</b>		<b>170</b>	<b>100%</b>	

Despite increases in enrollments and course offerings over the past decade, the general purpose classroom inventory has not grown. One coping mechanism the Registrar has used to manage the lack of classrooms, especially during peak periods, is to use space beyond the general purpose classroom pool. This includes buildings such as Kimmel, the Academic Resource Center. Courses are effectively scheduled in these buildings but they take second priority and also result in heavy utilization of these spaces. Departments who insist on maintaining courses at peak scheduling times will often opt for scheduling courses in their departmental spaces such as faculty conference rooms as opposed to rescheduling courses to underutilized time periods.

Beyond this, there are proprietary classrooms under the control of certain schools and/or departments that are not available to the Registrar for scheduling or even as a coping mechanism. A good number of these classrooms are specialized instructional spaces including science teaching labs, performing art and art studios, etc., and not suitable for lecture or seminar style courses. However, there are also a number of these classrooms that although configured to meet a particular curriculum can be used in a general way. This inventory could potentially provide some additional relief but access to these rooms, like access to Kimmel and the Academic Resource Center would need to be assured and predictable from semester to semester to have any impact to classroom utilization.

Classroom utilization has traditionally been a very difficult issue at NYU. Schools and departments retain responsibility for scheduling courses and have been very reluctant to schedule 8AM and Fridays. In order to achieve increased or even just better utilization of classroom inventory, there may need to be a number of policy changes. One such policy change would

require courses to have a classroom assignment when they are initially scheduled well in advance of a semester's start to avoid the pre-semester crush of hundreds of sections not having a classroom assignment sometimes only days before the semester begins. Another policy change would be to require minimum use of 8AM and Friday time slots so that each school and department bears responsibility for efficient use of the schedule. Both of these changes would necessarily impinge on the discretion now exercised by schools and departments and involve a major change in the terms of current practices with regard to course scheduling.

In conclusion, the complexity of classroom scheduling, especially at high utilization rates, means that any potential policy change - whether it be increasing classroom utilization or implementing better classroom scheduling practices - needs to be extensively analyzed before being able to determine (1) whether the change could be practically implemented with respect to not adversely effecting pedagogy; and (2) the precise impact to classroom inventory.

CC: David W. McLaughlin