

To the Academic Senate:

Due to the Senate's busy schedule in the spring, we are restricting our current report to Charges Three and Four. Charge One was reported on this past fall, and Charge Four will be reported on in the coming fall.

**Charge Three** to the Long Range Planning Committee for the 2010 academic year is to "In consultation with the RIT space committees, investigate RIT space planning and policies and their alignment with the strategic plan. Determine how space needs will be addressed with projected enrollment increases. Report back and, where appropriate, make recommendations to Senate."

The first hurdle faced by the Committee was to identify the space committees on campus. Our interpretation was that the Institute level committees should be considered, as they already have consulted with college and departmental level committees. We identified two relevant committees: the University Space Committee and the Academic Affairs Space Committee. In addition, we spoke with Joe Loffredo, the Registrar, who has access to space utilization surveys conducted by FMS for classrooms and teaching labs.

While all three groups had a considerable body of knowledge to pull from, our meeting with Joe Loffredo was possibly the most informative. Based upon previous surveys of classroom utilization, he indicated that once we are fully in the semester system, classroom space should be easier to identify as classes will be constrained to Monday-Wednesday-Friday or Tuesday-Thursday meeting times. Combined with the push for three semester hour courses and an average of fifteen semester credit hours per student per semester, this will help to spread out demand a little. However, two possible disruptions to this spread were identified: lab space and bridge courses for the semester conversion.

Labs are a present concern as we are seeing lab space overload in some colleges. Lab sections are already being space optimized with sections often at or near caps. Space in labs is limited to the number of stations in the room. Adding lab stations to a given room runs into safety issues. Increased enrollments will create the need for more lab sections. In multiple academic units, lab sections are already offered Monday afternoon through Friday. Monday mornings are not available as the instructors need that time for lab preparation and group meetings with lab instructors. The only room for further lab sections is late evenings (after 9pm) and weekends.

The Semester Conversion presents unique challenges during the transition periods of the 2012 and 2013 academic years. During this time, it is possible that courses will be implemented to help students transition through the complete of course sequences. As an example, we can consider a two-quarter course sequence in the quarter system that is converted to a one-semester course in the semester system. If a student finishes the first quarter of a two-quarter course sequence, but does not complete the second quarter before the end of the Spring Quarter in the 2012 academic year, a shortened course could be used in the summer of 2013 (summer of the 2012 academic year) rather than requiring the student to retake the entire new semester course. More poignantly, if a student would normally start a three-quarter course sequence in the Winter or Spring Quarters of the 2012 academic

year, there would not be an opportunity to complete the sequence in the quarter system. In this case, a Spring Quarter, Summer Quarter/Semester, or a Fall Semester course would help to cover this gap.

These transition courses potentially compound space issues in combinations with lab courses. In addition to requiring an additional lecture section, an additional lab section or sections will be required for transitioning into semesters. With lab space utilization already maximized, it will be a great challenge to find space for these additional lab sections.

Additional changes to strategic planning at the institute, college, or academic unit level could cause additional disruptions. For example, the current maximum number of credit hours per student is twenty per academic year unit (quarter or semester). If this were increased, the average number of actual credit hours taken per academic year unit would increase as some percentage of students would attempt to complete course requirements earlier or make up for courses which were not successfully completed. In order to fully understand the impact of the Semester Conversion and/or increased enrollments, a fuller set of parameters must be considered.

According to Joe Loffredo, RIT does not have the resources to develop a model with all of these factors. A simple model will be examined over the summer by the teams of Joe Loffredo (Registrar) and Fernando Naveda (Semester Conversion Project Director) to simulate classroom scheduling under the semester system. The plan is to use current student data, convert their programs to semesters, and build parallel semester schedules to see where the tension points are once in the semester system. However, this model will be under typical conditions based upon the current quarter system enrollment data. If atypical conditions present themselves, however, this model could be insufficient. Additionally, the model does not account for students falling out of sequence and the bubble that will create in the need for transition course sections.

In summary, there is a potential for space-related issues in the teaching of courses due to the Calendar Conversion and/or increased enrollment caps. Given the potential for detrimental impact on RIT if space is insufficient, it would be in our best interest to systematically examine the issue in depth. This may require the assistance of an outside consulting group. There is precedence for such consulting with the hiring of Paulien & Associates several years ago, again for space issues. Given how Joe Loffredo pointed out that surveys indicated that our space is being utilized about as well as we possibly can, we are left especially vulnerable to unexpected perturbations. An evaluation beyond the ability of this committee would be the safest course of action.

Reinforcing our conclusion, the University Space Committee (USC) has attended space meetings and webinars. The USC and the AASC are each making independent proposals regarding space, including more than just classroom needs (e.g. classes, laboratories, research, office, conference), that includes the purchase of a more robust space audit system.

Additionally, it is important to start considering backup plans in case of such overloads. It has been suggested indirectly that we may be able to make fuller usage of the summer and coming January intersession to head off any problems. These periods, and other opportunities, should be examined. It may be useful to set up focus groups to brainstorm alternative plans at a minimal cost to the Institute.

**Summary: We recommend further study of future space needs in depth, in collaboration with USC, as well as the development of contingency plans as far in advance as possible so that there is sufficient time to react.**

**Charge Four** to the Long Range Planning Committee for the 2010 academic year is to consider the potential impact of projected enrollment growth on the realization of the Academic Strategic Plan, especially regarding class size, pedagogy, and space availability.

Given that the projected enrollment growth is anticipated along the same timeline as the semester conversion, similar issues in space noted in the report for Charge three are anticipated and may be even more acute due to an increased number of students. Limited facilities to educate larger class sizes and the consequences for facilities such as lab space are especially notable (given issues described in the report for charge 3). Further study in terms of the alleviation of some pressures in terms of utilizing summer terms (as an example) are needed, but new ways of staffing such courses may be needed given that many faculty are engaging in scholarship during the summer.

The potential for increases to class sizes is likely, however only to a point as there are many restrictions as to how large a class size can be. For example, lab sizes and studios have hard size limits and since those facilities are specialized a limit exists as to how many of these can be offered. Any deviation from that would result in a change to how departments such as those in the sciences educate students. Most classrooms are also limited to class sizes in the range of 30-40 students, with a minority of classrooms being able to accommodate more than 50 students. In keeping the class sizes the same, additional sections of general education and required program courses will stress the existing system as even if more faculty are hired there will be no where to put the added course sections.

As the class sizes grow so does the potential impact on pedagogy. Persistently larger class sizes will require many instructors to rethink how students are assessed (exams/quizzes) and how individual projects are conducted. Given the increased desire for student writing across the curriculum, the increased time needed to assess writing will require more effort. The use of technology can be leveraged in large classes (e.g. Clickers) whereby large groups of students can use tools to interact with the instructor. Further study is recommended in order to assess the use of different technology use in the classroom and the desire for training/support avenues to help with larger class sizes.

While courses offered in the distance format would seem to be an ideal solution in terms of the lack of classroom space needed for a potentially large class size, potential issues must be examined further. Does RIT have appropriate infrastructure to scale up the number of courses offered in the distance format? How much additional work is needed to convert courses to the distance format, including those with additional infrastructure that is required? What types of course are amenable to being offered in the distance format? Focus groups of faculty who currently teach distance courses as well as a cross-section of other faculty should be conducted in order to assess such issues. In addition, interviews with staff who support distance courses should be conducted to assess staff-centric and infrastructure-centric issues.

**Summary: In parallel with the space study recommended for Charge Three, we recommend further study of infrastructure and pedagogical implications in depth. In terms of space, contingent plans should be developed to include increased enrollment. In terms of implications on pedagogy and class size, focus groups with various instructional and staff stakeholder groups should be conducted in order to locate critical issues, bottlenecks, and strategies so that all groups have time to react as enrollment increases over time.**