DATE: June 28, 2017
FROM: Eric J. Barron
TO: Matthew Woessner

Thank you for your advisory/consultative report, *Course and Classroom Scheduling Recommendations*, which was passed by the Senate at its meeting on April 25, 2017.

I appreciate the concerns associated with the implementation of the new course and classroom scheduling process and the related CollegeNET software. It is understandable that there has been a learning curve associated with the introduction of this new enterprise-wide IT system, especially as it coincided with the adoption of a new enterprise-wide standard class meeting schedule. As more is learned about the functionality of the system, adjustments are being made to better align the resultant classroom assignments and attributes to the course and instructional needs. This experience with the system, combined with consideration of the applicable recommendations in the Senate report, will then help to inform the changes that need to be made to Policy AD-82 – Classroom Scheduling, with the goal of ensuring efficient and productive use of our available instructional spaces.

cc: Blannie E. Bowen
    David J. Gray
    Daniel R. Hagen
    Nicholas P. Jones
    Robert A. Kubat
    Robert N. Pangborn
May 17, 2017

Eric J. Barron, President  
The Pennsylvania State University  
201 Old Main  
University Park, PA 16802

Dear President Barron:

The University Faculty Senate, at its April 25, 2017 meeting, passed the following Advisory and Consultative report:

Course and Classroom Scheduling Recommendations

Attached to this letter are the report from the Senate Agenda and the comments from the Senate meeting. We forward these recommendations to you for your approval and implementation.

Sincerely,

James A. Strauss

Enclosures

c: Matthew C. Woessner  
Blannie Bowen  
Daniel R. Hagen  
Nicholas P. Jones  
Rob Pangborn  
David Gray  
Robert Kubit
SENATE COMMITTEE ON UNIVERSITY PLANNING

Course and Classroom Scheduling Recommendations

(Advisory/Consultative)

Implementation: Upon Approval by the President

Introduction
The members of the University Planning Committee have been asked by Faculty Senate Chair Strauss to review and evaluate the course and classroom scheduling process. With the adoption of LionPath and the CollegeNET Optimizer for classroom and event scheduling, the University has experienced a large number of scheduling difficulties since the beginning of the Fall 2016 semester. As we approach the end of the first full academic year with these systems it is imperative that specific problems be addressed as soon as possible. Although the list below is not exhaustive, we believe that it represents the most important immediate problems that we face. A list of recommendations that address how to correct these problems is included. Further improvements to the system will need to be examined in the future.

The Current Course Scheduling Process Summary:
Each semester, the administrative staff within each department must add all details, including course time, estimated enrollment, room requirements, and other information for each course. Once the information is entered into LionPath, then the CollegeNET Optimizer will import the information from LionPath, and then automatically schedule all courses through the prioritization within the CollegeNET Optimizer. After an initial optimizer runs for all standard time periods, there is a second run of the optimizer to assign classrooms to non-standard time periods. Following the automated scheduling with the optimizer, then departments can request remaining available rooms if their classroom was not scheduled, or there is a desire to alter the room. It is important to note that the current process differs significantly from the previous system used prior to the Fall 2016 semester. The previous system (ISIS) was set up to comply with the classroom prioritization defined within Policy AD-82 - Classroom Scheduling, which outlines three levels of prioritization for classes [1] Roll-over; 2) Priority scheduling of general purpose classrooms; 3) General credit] along with prioritizing other classroom uses [4)Instructional support; 5) Co-curricular; and 6) Non-credit and events.] The current process simply selects rooms based on availability within a particular partition (building or cluster of buildings), with an initial priority to standard course times, and then a second run for non-standard course times.

The current classroom scheduling approach does not ensure that a classroom will be available for each course in the requested time period, and there are multiple examples of departments who have altered their course scheduling to identify acceptable classroom assignments. The shifting of time periods of classes between semesters and years can have a significant impact on students and departments who are striving for consistency within semester schedules, especially for departments that offer required courses once per year. While consistency is not always possible, predictability should be a goal to assist students in avoiding scheduling conflicts that can delay their degree completion.
During the initial implementation of the new LionPath system and the CollegeNET Optimizer, there were 53 departmentally controlled rooms reclassified to general purpose classrooms, but with a promise that these rooms would not be scheduled frequently, and that they would be primarily available for department use, except for several hours of classes per week. These rooms were previously used by departments for research seminars, faculty candidate presentations, thesis proposal and defense presentations, guest lectures, student organization meetings and departmental classes. These classrooms have been added into the CollegeNET Optimizer as General Purpose Classrooms, and there are no different priorities on these classrooms as compared to other general purpose classrooms. Through an analysis of these rooms, they have an overall utilization of 44.1% in Fall 2016 and 37.8% in Spring 2017, which significantly exceeds the initial estimated use of these rooms. In fact, 21 of these newly reassigned GPCs had usage rates over 50% in the Fall 2016, and 14 were above 50% in the Spring 2017.

**Recommendations**

After reviewing the challenges encountered by departments within the classroom scheduling process, the University Planning Committee provides the following recommendations to improve the process effectiveness and efficiency.

**Recommendation 1:**
Add functionality to LionPath to allow for course information to be automatically populated for each semester from the previous year’s information. This would significantly reduce the staff time required to develop the initial classroom request and it will also reduce the possibility for data entry errors, especially with the settings that support the CollegeNET Optimizer.

**Recommendation 2:**
Add functionality to LionPath to enable the automatic roll-over of classrooms from the previous year. This would be similar to the previous approach that prioritized the previous use of the room, provided that the room was used to a 70% capacity per Policy AD-82 - Classroom Scheduling.

**Recommendation 3:**
Add functionality to the CollegeNET Optimizer to allow for an instructor to be scheduled in the same classroom when teaching multiple sections of a course within two adjacent standard time periods. This will reduce the disruption to class instructors by not having to relocate to a new classroom.

**Recommendation 4:**
Add functionality to LionPath and CollegeNET Optimizer to include prioritized classroom scheduling for departments in a similar manner as the previous ISIS system, and in compliance with Policy AD-82 - Classroom Scheduling.

**Recommendation 5:**
Add functionality to the CollegeNet Optimizer to only schedule classes in the 53 newly reassigned GPCs that were previously used for departmental functions when a room that meets
the scheduling criteria is not otherwise available. This would enable the departments to continue to have a priority for these spaces, except when the rooms are needed for classes due to full capacity at the time period. The departments can then schedule classes or other department activities within these classrooms.

Recommendation 6:
Evaluate the class schedule time periods to ensure that departments are complying with the 45% maximum classroom scheduling from 10 - 2 pm, and minimum of 15% of course offerings on each day of the week (Monday to Friday), and Maximum of 30% of course offerings on any day of the week (Monday to Friday), as stated in Academic Administrative Policy C-1.

SENATE COMMITTEE ON UNIVERSITY PLANNING

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Excerpt from Senate Record

Course and Classroom Scheduling Recommendations

Chair Strauss: Our final advisory/consultative report that is on the agenda is from University Planning. It appears as Appendix P. Committee Chair Laura Pauley will respond to your questions. Laura?

Laura Pauley, Engineering: I'd like to make a few comments first.

Chair Strauss: Absolutely.

Laura Pauley: OK. The University Planning Committee was asked by Faculty Senate Chair Strauss to review and evaluate the course and classroom scheduling process that uses LionPATH and CollegeNET. The committee conducted a thorough investigation of the current course scheduling process. There are two University policies that describe classroom scheduling. Policy AD-82, titled Classroom Scheduling, describes the process for rollover of classroom assignments from one year to the next when seat utilization is above 70%. AD82 also describes the process for priority scheduling of general purpose classrooms, GPCs. Neither of these procedures are currently being followed in the classroom scheduling through LionPATH and CollegeNET. Recommendations 2 and 4 address the need to apply policy AD82.

Academic administrative policy C1 describes the required distribution of courses across the time periods during the day. This policy also is not currently being implemented. Recommendation 6 describes the need to distribute classes across the available times to increase class utilization.

Todd Clouser, Associate Registrar and IT Manager, attended two UPC meetings to present information about the CollegeNET optimizer and answer questions. He provided utilization reports for UP classrooms, classrooms over 200 seats, and recently-reclassified General Purpose Classrooms. In looking at the utilization of rooms that were recently reassigned as GPC, we found that those classrooms were being scheduled with the same regularity as other GPCs. Recommendation 5 requests that the newly reassigned GPCs be only used as a last resort. Todd told UPC that this capability was possible in CollegeNET but was not currently implemented.

Members of UPC talked with staff in their department offices to learn about difficulties and concerns in using LionPATH and CollegeNET. Some additional departments that schedule many courses, such as the math department, were also contacted. Two primary challenges in the new system arose-- the desire to have course and classroom schedules automatically repopulated each
year and the desire to request the same room for sequential course sections when the same instructor is teaching. These requests appear as Recommendations 1 and 3.

I would like to thank Todd Clouser for meeting with the committee two times and generating the Classroom Usage Reports for review. I would also like to thank John Messner and Nick Pearson, members of UPC, who prepared this report. I can answer any questions that you have.

Richard Singer, Altoona: Singer, Altoona. I guess my question relates to the fact that we haven't had a heck of a lot of success getting LionPATH to change anything. And so I wonder if your committee talked to them to see if this was feasible or if it's going to cost us $10 million and two years to implement.

Laura Pauley: No. We asked Todd, and Todd said he was not aware of these classroom scheduling policies. It is possible to roll over classroom scheduling. It is possible to-- what are the other ones-- to have the newly reassigned GPCs be used as a last option in times when there are more desiring rooms than classrooms available. All of these recommendations are currently available in CollegeNET, and many of these are also in LionPATH, that LionPATH-- say, the rolling over the classrooms, that would be done in LionPATH. Those available room slots would never even go to CollegeNET for consideration by the optimizer. Yes, Todd is the IT Manager in the Registrar's Office. And so he told us all of that would be possible.

Lisa Posey, Business: Hi. Posey, Business. I'm just concerned about rolling over classrooms that are not what we want, because now we're living with people all over the place that aren't-- yeah, so could we get it the way we really would like it before we rolled over?

Laura Pauley: Sure. It would be only rolling over if you desire that.

Lisa Posey: Well, but if other people--

Laura Pauley: And there is a requirement that you need to-- the AD82 requirement is that you need to have filled that room to at least 70% capacity in order to have that option of rolling it over.

Lisa Posey: I'm just saying that other people might roll over into classrooms that-- so for instance, in our building we have this big building. And since this happened, most of our-- not most-- many of our people have been leaving and walking across campus, and then people from other parts of campus were coming to our building. And if, let's say, they roll over into our building, then we can't get-- so, is there a way to sort of not have that rollover happen until the different units feel that things are a little bit more like they used to be in terms of comfortability with the classrooms?

Laura Pauley: I mean, the optimizer is supposed to maximize happiness. But--

[LAUGHTER]
That's what optimizing is. It's an issue of what you define as happiness. But optimizing is to maximize happiness. We need to define what is happiness for the optimizer. And it will do that. For example, we are only currently using two levels of choice for scheduling. There's a local area that you can choose as your first choice, and then you can choose other sections of the campus as your alternate choice for classrooms.

The CollegeNET actually has four levels of priority that you can set. And Todd told us it's also possible as your first priority to really narrow this down, be more specific to a particular building that you would like to have as your top priority. That's not the way CollegeNET is currently set up, but there is that capability. And Todd said the University was trying to simplify things by having just two levels of preference instead of using all four. But there are options available.

**Chair Strauss:** Do we have additional questions for Laura's very thorough report? Seeing none, I believe we are ready to vote. All in favor of accepting the report, please press A. If you do not see things that way, you may press B.

**Anna Butler:** On Poll Everywhere, I have 10 accept.

**Chair Strauss:** Advisory/consultative report is accepted. Thank you very much, Laura, for your committee's work.