



To: Tim Sands From: Keith Murray Date: May 18, 2010

Subject: Balanced Trimester Plan

The balanced trimester plan that you shared has a lot of interesting facets to explore from the perspective of someone involved with scheduling and space management. In what follows I have tried to provide a preliminary look at some of the issues that will need to be considered if the plan moves forward along with some first impressions of the proposal.

The most obvious benefit of a balanced trimester schedule is the ability for a motivated student to progress through a normal 4 year degree program during the span of time usually associated with 3 academic years (2 and 2/3 calendar years). As someone who earned a Bachelors Degree in Mechanical Engineering at Purdue in 3 years under the current semester system, the balanced trimester schedule has a lot of appeal if it provides an increased choice of course offerings during the summer term. The other obvious benefit is better use of instructional facilities that go largely idle during the summer months under the current semester schedule. The most difficult hurdle to overcome in adopting such a plan, however, will be changing the traditional view of college being an eight or nine month pursuit with an extended summer break for either employment or leisure. There needs to be broad enough acceptance of a 12-month calendar in order to support a wider array of courses during the summer term and make better use of the unfilled spaces. This is mostly a social psychology issue that I have little insight into.

A number of points should be made regarding utilization of space under the balanced trimester approach. While the overall use of student spaces would increase, their peak usage rate would need to be decreased somewhat. In some cases this would require building additional facilities or decreasing the number of students on campus at a given time. With a light load on facilities during the summer, it is possible to do most maintenance and renovation without affecting instructional schedules or housing availability. A more balanced class load would require planning for some share of facilities to be unavailable throughout the year. This might typically cause a reduction of 5% in peak capacity. The increased throughput of students making use of otherwise idle facilities should more than compensate for this reduction in peak capacity.

The most important facility issue that would have to be faced with the balanced trimester approach is also a result of this increased flow of students through the system. Unless there is an increase in the instructional workload of faculty, it will be necessary to increase the number of faculty teaching classes to support the projected increase of 30-50% in the number of core courses. This will require an increase in the amount of office, research laboratory, and other faculty support spaces on campus. An increased flow of students should bring in additional tuition revenue to help support these facilities, but it is an important cost to consider in planning for such a change.

Moving to three equal length terms introduces a host of scheduling options to consider. As noted in the proposal, balanced trimesters would require compressing the length of each term from the current 15 weeks plus one week of finals to something shorter. In order to maintain

the same amount of instructional time in each course, this would require extending the length of each class meeting. At Purdue, each credit hour of lecture or discussion class is typically associated with 750 meeting minutes per term (15 weeks x 50 minutes). A 14 week term would need to have 54 minute meetings to provide an equivalent amount of class time. A 13 week term would require 58 minute meetings. A couple of points should be considered here. One is that it is debatable whether instructors would try to cover more material in a 54-minute period than they do in a 50-minute period. The more important consideration is that lengthening classes reduces the number of class periods that can fit into a day. Currently Purdue has 10 distinct class periods for MWF classes and 7 for TTh classes. In the same amount of time it is only possible to create 9 distinct MWF periods and 6 TTh periods based on a 55-minute meeting. This reduction in the number of class periods available makes it more difficult to provide students with schedules in which all of the courses they require are at non-conflicting times. The reduced number of periods in each day will also result in a need for an increased number of classrooms and some high use teaching labs in order to serve the same number of student class hours.

A number of logistical issues beyond the classroom should also be considered in any decision to change from semesters to trimesters. Three fourteen-week terms, each with an extra week for vacation, a week of exams, and a prep week, consumes 51 weeks out of the year. The Christmas/New Years holiday effectively consumes the 52nd week and intrudes into either the exam or prep week between fall and spring terms as shown in the sample calendar contained in the proposal. It is probably possible to adjust the calendar periodically to work out the winter holiday problem, but having only one "prep week" between terms creates even bigger headaches for operations such as student housing, particularly when you factor in events such as freshman orientation and commencement. There is considerable work involved in turning over a room occupied by a college student for 8 months to a year. If all students move out the day after finals and do not move in until the Saturday before classes start, that only leaves five days to clean and prep a room for its new residents. Students staying on for commencement or moving in early for orientation would eliminate even that time, or more. These factors argue that a 13-week class term is the longest that would be feasible for a trimester calendar. With only 13 weeks it would also be critical to make provision for Monday holidays, so that there would not be an imbalance in the number of class meetings for laboratories or other classes that meet only once per week on Mondays. This already leads to avoidance of Mondays by many courses with labs.

The actual scheduling of classes with different time patterns and term lengths should not be a major problem beyond the larger number of conflicts that would result from fewer periods and the associated need for additional rooms. There will be some negative reaction on the part of faculty to changing the schedules they are used to, but we have created an automated course timetabling system that allows a new schedule of classes to be developed without the huge effort that would be required to make such a change manually. It is even possible to run several scenarios ahead of time using existing data to determine in detail what the effects of a calendar change would be. The most challenging aspect would be making course demand projections during the transition between semesters and trimesters while student acceptance and use of the third term is unclear.

My overall reaction to the balanced trimester proposal is that it would be beneficial from the perspective of making more efficient use of facilities and providing students with more flexibility in the amount of time they take to earn a degree and participate in opportunities such as study abroad. Its success would depend heavily on whether students embrace these additional opportunities or hold to the traditional model of summer break. To avoid major additional costs associated with more faculty and the facilities to support them, I would

recommend starting out with a smaller number of students on campus at any given time but work for an overall increase in number of graduates produced per year. This would also address the maintenance needs and the loss of capacity due to the reduction in number of class periods. Some unresolved issues would remain, however, with the effect a reduced number of periods has on student course conflicts, particularly for students wanting to take advantage of the new calendar to graduate in three years. I would also recommend a 13-week semester to address logistical issues, particularly with housing.

Many of the points I have summarized above should be considered in much greater detail if there is interest in moving forward with this proposal. I believe a balanced trimester calendar is feasible at Purdue, but will take a great deal of serious study on these points and others that different groups may have an interest in.