Minutes of Collegial Assembly of September 22, 2010

Dean Dai called the assembly to order at 3:06 pm.

Approval of Minutes
The minutes of March 15, 2010 were approved.

Dean’s Report
After last year’s budget reduction of about 7%, the college’s budget has stabilized this year, in part because of stimulus funds allocated by the state to Temple. However, the university’s 20/20 plan assumes that reductions in the state allocation to Temple are likely in the future. This year, the Board of Trustees approved the college’s request for differential tuition to reflect the differential cost of science education. The increase is $400 per student per year over the 5-year period starting in Fall 2010. CST has added 32 new tenured or tenure-track faculty since 2007, including 8 who began in this calendar year. There were 3 retirements this year. Of the 32 faculty appointments since 2007, 9 are senior appointments. Hiring will continue, with 8 searches authorized for this year. Research funding continues to increase; expenditures were about $7 million in 2006-07, and about $14 million in 2009-10. New major research facilities have been added (XRD, TEM, confocal microscope), and a supercomputer is being ordered. Personnel changes include: Allen Nicholson, former Associate Dean for Research and Graduate Studies, becoming Chair of Biology; Shohreh Amini, former Chair of Biology, becoming Associate Dean for Research and Graduate Studies; and Brooke Walker, former Director of Development, moving to Associate Vice President in the Office of International Affairs.

Construction of buildings under the university’s 20/20 plan has begun, including a $150 million complex of residential hall, retail shops, and restaurants. The renovation of McGonigle Hall is under way, and groundbreaking for the new Architecture building is planned. Funding for the new Research/Science Education building ($110 million) is in place, and groundbreaking is scheduled for March 2011, with completion planned for Fall 2012. The building is to have 9 or 10 stories, about 250K gross square feet, about 180K net. CST’s goal is to have about 150K net square feet of space. Discussion of occupancy is continuing. CST usage will be mainly for theoretical/computational research, but some floors (perhaps 4) will have wet labs. Some space will likely be occupied by non-CST units (Engineering, Health Science) or even by non-Temple research. The Dean’s Office will not be located in the building. The new library building is scheduled for completion in 2013, to be followed by a $90 million renovation of Paley to be completed by 2015, for CST use.

Enrollment in CST continues to increase. CST total headcount is 3,921, an increase of 5.4%. CST full-time undergraduate enrollment is up 4.9%; graduate enrollment is up 12%. Enrollment of new students in CST (freshmen and transfers) is up 1%. We continue
to enroll about 1100 new students each year, but graduate only about 500. What happens to the others? The 6-year graduation rate for Temple is about 67%. National graduation rates for the sciences are about 62%. For CST, the rate is about 57%, including pre-Pharmacy students who disappear after about two years. It is up to us to find a solution to the problem of low graduation rates. Associate Dean M. Luehrmann has researched the data available to us to find patterns among our students that may help us to determine which students are at risk, and enable us to intervene successfully.

**Introduction of New Faculty**

E. Letzter, chair of Mathematics, introduced Vasiliy Dolgushev (who could not attend). S. Amini, for A. Nicholson, chair of Biology, introduced Assistant Professors Rob Kulathinal and Tonia Hsieh (both of whom joined the faculty on January 1, 2010). R. Tao, chair of Physics, introduced Associate Professor Maria Iavarone (who also joined the faculty on January 1, 2010) and Assistant Professors Ke Chen and Xifan Wu.

**Discussion of Retention Data**

M. Luehrmann presented graphs of data on retention and identification of at-risk students. According to U.S. News reports, Temple ranks lower than comparable universities in freshman to sophomore retention. Data indicate that our one-year retention rates are strongly correlated with the number of credits taken by students in the first semester, suggesting that students should be urged to take more than 15 credits per semester, and urged to spend less time in employment during the semesters, and more time in employment during the summers. CST Retention rates are also correlated with mathematics placement. These correlations indicate the importance of early identification of at-risk students. University processes to identify at-risk students have used overall and semester GPA. We want instead to identify students who are at risk in their majors, not overall performance, so that we can find early the right match between student and major. For each major, certain courses have been identified as benchmarks, i.e., predictors of successful progress through the major. Data show that lower math placement scores correlate with lower rates of meeting benchmarks even when extra time is allowed for the lower math levels.

J. Nyquist suggested that students with low math placement should not be admitted to CST majors. B. Datskovsky suggested that, while math proficiency can be determined by testing, low rates of meeting benchmarks may also indicate that at-risk students are lacking in other areas for which they are not tested. T. Hughes suggested that students’ study habits and attitude toward studying are also major issues. E. Borguet asked whether CST could raise admissions standards. J. Nyquist et al. noted that the college has no control over admissions to CST. G. Ingargiola noted that while low math placement and study skills may reliably predict lower rates of success, we should also consider modifying the pedagogy we offer, e.g. covering less variety and quantity of material while promoting greater student engagement. M. Lyyra suggested providing quiet space for group study; B. Datskovsky noted that some programs have supervised study halls and homework sessions, for which facilities are needed.
Dean Dai reviewed the main points of the discussion: to improve retention, we need to use benchmarks and placement scores for early detection of students who are at risk, and improve advising for them; we need to provide additional ladder courses for those who lack preparation; we should improve our teaching skills to promote student engagement and improve students’ study skills; we should lead students, through advising and incentives, to take more credits and to concentrate more on academics, less on employment during the academic year. To this end, the college will use some of the funds from differential tuition to increase college-based and need-based financial aid linked to research.

**Discussion of Grade Calibration**

D. Forster asked whether CST’s low rate of retention might be related to our grade scale. M. Luehrmann displayed numerous graphs of grade distributions indicating that smaller percentages of CST students receive high grades than in other colleges at Temple; that in selected science courses for which national data is available, we give smaller percentages of high grades to our students; that our grading in Fall and Spring semesters is harsher than our grading in summer semesters. Dean Dai posed the question: is grading calibration and consistency an issue on which we should take action? S. Amini asked whether grades could be correlated with student engagement. M. Luehrmann noted that, although time did not permit display and discussion, there was data from outside Temple suggesting a strong correlation between grades and engagement, and also suggesting a disconnect between students’ expected grades and actual grades. G. Ingargiola noted the anomaly that numbers of students who are judged not to have the requisite skills for the first course of a sequence nevertheless get grades that allow them to pass to the next course, and acknowledged less interest in the numbers of A or B grades than in maintaining standards for advancing in a sequence. Dean Dai agreed that we should uphold the standards for passing on to the next course, but, aside from that, we should ask whether our current grading is correctly calibrated. D. Forster noted that our students do well enough to graduate in Liberal Arts, but not CST, so that our grading policy is right if we favor having more liberal arts graduates. Dean Dai asked for comment on the general question: is grading an issue we should address, by determining standards for grade distribution, with some guidelines to minimize differences between sections of courses and between grades at Temple and other comparable institutions? Discussion focused on whether we should have standards or guidelines, whether attendance or participation should form part of the grade, whether our grades would be credible when viewed by outsiders. Dean Dai noted that the sense of the assembly appeared to be that the idea of addressing grades was not objectionable to the faculty; he would therefore ask M. Luehrmann and the Undergraduate Committees of the college and each department to work on guidelines which would include a permissible range of variation, with the goal of achieving both consistency and fairness. He emphasized that we need to continue work on creating new ladder courses, working with advisors on early detection of at-risk students, and increasing college-funded financial assistance to support student scholarship and research and to increase rates of retention and graduation.

**Adjournment**

The meeting was adjourned at 5:12 pm.
Respectfully submitted by R.J.