An Increased Emphasis on Bi-Term Courses at WKU?

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August, 2012

I. Background and Motivation

Significant external forces are impacting how college education is conceptualized, developed, and delivered. In particular, there are clear signals that increased attention should be given to shortening the time to degree completion and increasing the level of scheduling flexibility for students, while maintaining rigorous academic standards. This strongly suggests that universities explore and re-evaluate how academic programs are designed and delivered.

Consistent with our vision as "A Leading American University with International Reach," WKU has already pioneered many advances in course delivery, notably in distance learning, and our academic programs are the better for it. In order to further enhance the educational experience of our students, and to provide them an enhanced level of flexibility in meeting their educational and career goals, the Office of the Vice President for Academic Affairs proposes that WKU consider a move to offer a substantially greater number of courses in bi-term mode. The impetus for this proposal can be found in numerous studies of accelerated learning (a mode of course delivery that provides shorter but more intensive windows of learning) that delineate the considerable benefits associated with such a practice.

This idea is very much a "work in progress." Similar to the draft of a journal article, conference presentation, or grant proposal, it has evolved considerably as a result of further study and with the input of a variety of "referees." An early draft of this idea, which at that time involved a full transition to a bi-term-based calendar, was discussed at a retreat of the Council of Academic Deans in June. A revised draft of the concept (still involving a formal calendar transition, but now as a parallel option) was discussed at a meeting of department heads and assistant/associate deans on July 25. There it was generally agreed that the focus should be further moved toward exploring an increased emphasis on bi-term course offerings, and to let the results of such an "experiment" guide further steps. It was also agreed that the idea merits further discussion across campus, including a number of steps that are outlined in the concluding section of this document.

The information in this document was prepared over a period of several months, involving input from a small ad hoc committee and a survey of the literature (with references being provided by a number of individuals), and I would like to acknowledge the many individuals who have participated in the discussions so far. The document does not purport to present an exhaustive list of all pertinent issues. Nevertheless, as a result of the various discussions so far, the idea has matured to the point where it is ready for widespread dissemination and discussion.

Finally, it must be emphasized that this proposal is ***not*** being introduced because of any perceived deficiencies in WKU's academic programs or in our currently predominant semester-based mode of course offerings; our faculty already do an outstanding job in educating our students and preparing them for future careers. And, although it has the potential to provide significant (and much-needed) revenue to the university, the primary motivation is based on academic, not financial, considerations. Overall, the idea is being put forward as an opportunity – an opportunity to provide students more flexibility in class scheduling, to provide faculty more flexibility in their teaching schedules, to allow greater efficiency in faculty staffing, and to promote greater student retention and reduced time to graduation.

II. The Case for an Increased Emphasis on Bi-Term Courses

A. Literature Review

A list of references consulted appears at the end of this document. It must be acknowledged that many of these studies are based on limited sample sizes, and in some of them only limited, or even no, attempts have been made to control for differences in age, gender, ability and other pertinent student factors, or for differences in class structure. However, their conclusions are nevertheless consistent and, taken as a whole, they are sufficiently compelling to warrant serious consideration. Rather than go into each study in detail, the results from only a few will be presented here; the interested reader may consult the other references through the URL links provided.

One of the more extensive treatises on the subject, by Scott (1994), noted that two themes "repeatedly emerge in the literature":

(1) "intensive courses yield equivalent and sometimes superior learning outcomes" and

(2) "intensive courses produce qualitatively different student learning experiences."

She noted that "student experiences are different in intensive courses," but "the quality of the experiences depends on the presence or absence of certain attributes," which can collectively be summarized as a process-oriented, connected, approach to learning in which class time is used to reinforce knowledge and understanding in diverse ways through enhanced student connections with the material, with the instructor, with the classroom, and with other students.

This point is critical, and can perhaps explain why the accelerated learning model has not enjoyed widespread acceptance or application to date. But in today's world, in which students have access to virtually unlimited information over the internet, the success of any instructional delivery model, and particularly an accelerated one, requires that class time be used to enhance the value of that information, rather than simply transfer it. There is currently much discussion, in both K-12 and higher education settings, on the benefits of "flipped" classes, in which students study the material (perhaps in a textbook, perhaps online) and attempt assignments in advance, and then use the class time to reinforce and augment the knowledge they have already gained by performing and completing assignments in a highly interactive environment.

When such learning-enhancing attributes are present, Scott found that the accelerated learning mode offers greater continuity of learning, and greater concentration and focus. Indeed, she concludes that "if students perceive most or all of the high-quality learning attributes to be present, intensive courses become more than just positive learning experiences; they can become powerful learning experiences – more powerful that comparable courses offered in traditional semester formats." This is because intensive classes synergistically ***amplify*** the effect of the high-quality attributes above. Because students take only two or three courses at a time, rather than five different subjects during a typical semester, the greater contact time per day and the day-to-day continuity of class sessions allow instructors and students to explore teaching methods outside the norm of the traditional lecture format. Such a continual focus on the subject (in Dr. Scott's words, they "eat, sleep and drink the class"), in combination with a process-oriented connected approach, strengthens students' connections with the material, with fellow students and with the instructor. Overall, it "increases students' …willingness to participate."

In her 1994 study, Dr. Scott reports that students felt that the longer class sessions "fostered more in-depth and meaningful discussions" and "required more mental investment and commitment." She also found that students could plan their schedules better, could maintain their academic momentum and stamina better, procrastinated less, and were not so inclined to deprioritize "less important" classes, as they might do with, for example, what they perceive to be the fifth-most-important class in a semester. Students reported feeling more "disciplined to attend class," a sentiment confirmed by attendance/absentee records. They reported that they retained information better and established not only a closer instructor-student relationship but also a greater sense of class involvement. They described the learning experience as a "shared" experience – more like a "community," and, last but not least, they reported that the intensive classes were overall more ***memorable***.

Several other articles in the published literature (see reference list below) also note the distinct advantages of learning in the "accelerated learning" environment that compressed terms, such as bi-terms, provide. In particular, Martin & Culver (2007) summarize that

> "The literature appears to show that compressed courses are not inferior to semester-length offerings, and in certain situations can indeed be superior"

and that

> "Without doubt, intensive courses hold the promise of exceptional learning experiences for both students and faculty."

Fairness demands that we also mention some disadvantages that have been noted. Lee and Horsfall (2010) carried out a survey of faculty and student experiences in an accelerated learning environment, involving students from the colleges of business, design, engineering, information technology, and life and social sciences. While they concluded that "students reported overall positive experiences, particularly in the social aspects of learning, higher than usual motivation, and confidence in their learning," they also acknowledged "concerns about the scope and timing of assessment tasks, student workload expectations, faculty workload, and administration of courses." They noted that missed weeks due to student or faculty absence would now constitute a greater fraction of the course, from which it may be more difficult to recover. They specifically noted that "students needed to be more aware of the impact of missing classes during accelerated courses." Other concerns cited in the literature include instructors eliminating or shortening assignments due to time constraints, and the loss of semester-long projects, which are generally viewed as valuable learning experiences. Some will argue that the shortness of the term restricts the time for adequate reflection on the material learned and is more demanding on both students and faculty. Addressing such areas of concern must, of course, be an integral part of any further assessment of a move toward a greater number of offerings of courses in the bi-term mode.

B. Student Success in Bi-Term Classes

There are, of course, a wide variety of academic calendar systems in use throughout the world. In the US alone, various universities offer courses in a variety of scheduling formats, including semesters, quarters, 10-week compressed "quarter-mesters," bi-terms and even in three-and-a-half week "blocks." At WKU, courses in summer and winter terms schedules are offered over durations as short as a few weeks and, of course, at the level of graduate theses and dissertations, the very concept of a semester becomes somewhat arbitrary.

One, potentially instructive, transition has occurred at Arizona State University, which has started offering courses concurrently in the bi-term mode and in the traditional semester mode. Provost Betty Capaldi reports that the bi-term mode is "unbelievably popular" with both faculty and students; the option was introduced only recently (in Spring 2012), yet already some 500 face-to-face, and some 300 online, sections are scheduled to be offered in bi-term format in Fall 2012. For the first semester in which bi-term courses were scheduled, freshman-sophomore retention rates for students in bi-term classes exceeded 90% (significantly higher than students taking classes in the traditional format), and Provost Capaldi reports that student learning outcomes were "equal or better" to those of students taking courses on the traditional calendar.

Similar enhanced learning outcomes apparently hold for students here. WKU already offers some 5% of courses in a bi-term format, and an examination of some 30,000 course enrollments revealed that students generally performed better on accelerated courses (e.g., bi-term courses, summer and winter courses) than the same students did in traditional 14-week courses. Although this analysis still suffers from possible pre-selection bias and other confounding aspects of such a non-scientific study, the results are nevertheless rather interesting: WKU students in first bi-term courses have an overall GPA of 3.17, compared to 2.78 *for the same group of students* when they enroll in semester-length courses *in the same terms* (i.e., at the same phase in their studies). The percentage of D/F/W grades was 13.7% in bi-term courses, versus 22.9% for the same students in semester-term courses, and the withdrawal percentage in bi-term courses was only 4.2%, just under half that for the same students taking semester-term courses.

Beyond the pedagogical advantages of the accelerated learning model, there are other advantages to consider. Within a compressed term there is less time for outside influences to interfere, and, as noted above, students are less likely to completely withdraw. The lower number of courses per semester makes it easier to assign students to Learning Communities, the more frequent contact between students and advisors/counselors associated with a shorter term is beneficial to student retention and success, and students with multiple developmental needs can take developmental courses consecutively rather than concurrently.

C. Benefits for Faculty

1. Flexibility in Teaching Load Distribution

A shift to teaching courses in bi-terms would not directly affect the overall total teaching responsibility for faculty; the number of contact minutes per year stays the same. However, a greater emphasis on bi-term courses would allow faculty members a much higher degree of flexibility in spreading this teaching load over an academic year. For most faculty, teaching exclusively in a bi-term format would entail no more than two courses per bi-term, and, with judicious scheduling, it could be arranged for a particular bi-term to involve teaching only one course, or possibly even no courses at all.

The possibility of a whole bi-term free from formal teaching obligations opens up the possibility for extended periods of time for scholarly activities (including those that involve travel, such as attendance at conferences, Fulbright Scholar exchanges or collaborative research visits) and course development. Of course, if a faculty member chose to teach during such a "free" bi-term, any additional teaching carried out would, just like teaching in the winter term, be considered "outside of effort" overload and compensated accordingly. This could have a positive effect on overall faculty compensation.

"Mixed" teaching models would, of course, also be possible. For example, a faculty member who currently teaches three courses in a given semester could teach one in each bi-term, plus one over the entire semester, thus involving only two courses at any given time.

a. New Faculty

A bi-term arrangement could be very attractive for new faculty, since it would be possible for them to have only one course to teach in their first few weeks on campus, thus allowing them to "settle in" without the burden of multiple new course preparations.

b. Pedagogical Faculty/Instructors

Faculty currently teaching a 4-4 load could presumably accomplish the same annual teaching load as 2-2-2-2, although other models are possible. Total contact time would be 640 minutes per week (the same as it is now), still allowing ample time for professional development.

c. Part-Time Faculty

Part-time faculty would have to commit to only seven weeks of time, rather than the current fifteen, per course; this may prove advantageous in attracting qualified part-time faculty. An individual who wishes to serve as a part-time faculty member, but who can only teach one course at a time, could teach twice as many courses per year. This could be beneficial both to the part-time faculty member and to the employing department.

d. Transitional Retirees

The maximum-allowed four courses per year could, for example, be accomplished as 1-1-1-1 or as 2-0-2-0. Other combinations are, of course, possible.

2. Pedagogical Implications

As noted above, the literature is emphatic that offering courses in an accelerated learning format leads to enhanced educational outcomes only if the faculty members and students involved accept a fundamental change in the way that class time is spent. Although this could involve a significant restructuring of course materials for those faculty members who choose to participate, ongoing re-examination of course content is an integral part of higher education and usually has a significant positive impact on the course(s) in question.

D. Student Persistence and Graduation

One of the most compelling arguments in favor of an increased emphasis on bi-terms relates to the flexibility it provides students and the reduced time to graduation that it affords them, while maintaining high academic standards.

Under the current, predominantly-semester-based, system of course delivery, full-time students can take up to 18 hours per semester (and occasionally even more). In principle, such students could, by taking only 12 additional hours during summer or winter terms, graduate in as little as three years. Enrollment in 15 hours per semester leads to completion of 120 hours (and

possible graduation) in four years. Of course, not all students set out with the goal of graduating in the minimum time possible. Yet only a quarter of our full-time students do graduate in four years or less, and less than half a percent graduate within three years.

A very substantial number of students enroll in 15 or 18 hours, only to subsequently drop down to 12 (or fewer) by dropping classes of lower priority, thus extending the time to degree completion. The lower degree of freedom associated with a course load of only 2 or 3 courses per bi-term would presumably curtail such practices significantly, allowing students to actually earn the equivalent of 15 or 18 hours per semester and permitting them to graduate in the nominal four-year period.

With a greater number of bi-term course offerings, students (both full-time and part-time) would be provided an extraordinary degree of flexibility in scheduling classes throughout their university experience. To illustrate, consider a student enrolling predominantly in bi-term courses. Such a student would have several options, depending on their schedules and academic/career goals:

1. *"Efficient" Approach*

   By taking 3 courses each bi-term, a student earns 9 SCH per bi-term, 36 SCH per academic year, and 108 SCH in three years. Adding only an additional 12 SCH (4 courses) during the two intermediate summer and/or three intermediate winter terms brings the total credits to 120 SCH, allowing them to graduate in less than three years (e.g., August 2012 through May 2015);

2. *"Moderate" Approach*

   With a 50/50 mix of bi-terms involving three and two courses, respectively, a student earns (2 x 9) + (2 x 6) = 30 SCH per year and can thus graduate in four years, even without the need for summer or winter term courses. Students could choose to schedule more demanding classes during "light" 2-course bi-terms.

3. *"Light" Approach*

   Students taking only two courses each bi-term would earn 24 SCH per year and thus still be able to graduate in five years. (Currently only some 45% of our students graduate in five years or less.) Adding summer and/or winter term courses would make this time to graduation even shorter.

4. *Part-Time Students*

   Part-time students who can take only one course at a time (one course per bi-term, one course in the winter term and one course in each of three summer terms) would still be able to take eight courses (24 SCH) per year, enough to graduate within five years.

The above scenarios refer to students enrolled exclusively in bi-term courses, which may not be a realistic possibility. However, students would also have the option, as they do now, to take a mix of bi-term and semester courses. For example, the "efficient" approach could involve a student taking two courses in each of the two Fall bi-terms, concurrently with two semester-long courses. This would yield 18 SCH for that semester, with a maximum of four courses in progress at any given time.

III. Administrative Issues

A. Class Scheduling

Students taking bi-term courses would take only a small number of courses (either 2 or 3) at once, each "compressed" into a much shorter 7-week class session period. This would obviously entail significant scheduling considerations, both for classes and classrooms.

1. *Class Duration*

A 3 SCH class nominally (see, e.g., http://www.sacscoc.org/pdf/081705/Credit%20Hours.pdf) requires 3 classes per week x 15 weeks x 50 minutes per class = 2250 minutes of contact time. This amount can vary somewhat; indeed WKU currently uses 14 weeks x 3 x 55 = 2310 minutes; the classroom contact time per course is 165 minutes per week. A 3 SCH class held over seven weeks requires approximately 2250/7 = 320 minutes per week. These 320 minutes per week could be accomplished in a variety of ways: examples include 5 days x 65 minutes, 4 days x 80 minutes, 3 days x 105 minutes, 2 days x 160 minutes, or even 2 days x 2 sections per day x 80 minutes per section.

2. *Classroom Scheduling*

With a mix of bi-term and semester classes running concurrently, scheduling of classroom space would obviously be an issue that requires attention. It is reassuring to note, however, that WKU already offers 5% of course offerings in bi-term mode, so that to some extent we know how to deal with this. If the number of bi-term offerings were to substantially increase, it is feasible that we could simply designate certain classroom space for bi-term courses only. Another possibility might be to schedule bi-terms classes on, say MWF, leaving TR for semester-length courses.

It should also be noted that a significant improvement in staffing efficiency could result from offering a greater number of courses in bi-term mode. Currently, a student at WKU is considered full-time (and pays the same tuition) whether they take 12 hours per semester, or 15, or even 18. As mentioned above, this situation leads to a significant amount of "course-shopping," in which students initially enroll in up to 18 hours and then drop down to 12 or 15 shortly after the beginning of the semester. Because all courses in which a student is initially enrolled must be staffed, such a behavior pattern creates an unnecessary demand for faculty resources. In a typical semester WKU sees some 5000 SCH dropped in this manner. This corresponds to 80-plus sections or the teaching load of over 20 full-time faculty members. As noted above, the fewer of degrees of freedom associated with a full load of only 2 or 3 courses per bi-term would presumably curtail such practices significantly, allowing greater efficiency in the staffing of courses and a concomitant reduction in faculty teaching loads.

B. Registration and Billing

A significant move to four bi-terms per academic year would, of course, create several issues for student registration, billing, and financial aid. However, research by our Office of Student Financial Assistance indicates that there are no "showstoppers." They also noted that compliance with Federal Financial Aid requirements would be facilitated if students registered for a whole semester (two consecutive bi-terms) at the outset, as is currently done at Arizona State. However, tuition could be billed in two bi-term installments, thus spreading the financial

burden over the semester and having a positive impact on the number of students who are dropped for non-payment.

C. Tuition Structure

With students taking a mix of 2-course bi-terms, 3-course bi-terms and semester-length courses, it would appear appropriate to move to a tuition structure on which tuition was charged on a straight per-credit-hour basis. Simply put, it is reasonable (and a common practice elsewhere) for students who enroll in more hours each term (thus entailing proportionately more university resources) to pay tuition according to the amount of resources employed. In preliminary discussions with officials at the Council on Postsecondary Education, they have indicated that they see definite advantages of enhanced bi-term course offerings as a way of achieving statewide goals for student retention and success. Accordingly, they have also indicated that they would be willing to consider a shift to a straight per-credit-hour tuition model to facilitate the promotion of bi-term course offerings at WKU.

Full-time students who currently enroll in twelve hours per semester could continue to do so, in either semester mode, or bi-term mode, or a combination of the two. This would not result in any change in the cost of tuition per year. On the other hand, students who choose to integrate more courses into their schedule (e.g., through 3-course bi-terms) in order to expedite the time to degree completion would, on a per-credit-hour tuition model, incur a greater tuition cost per year. However, these students would also graduate more quickly, so that, factoring in all expenses associated with attendance, the total cost of a degree to such students would be *less* than it is now, and *a greater fraction of the total expense of attendance would be allocated to the academic core service*.

This reduced overall cost to the student, coupled with the opportunity to enter the workforce earlier, combined with a tuition model that is proportional to faculty effort and which could allow us to substantially address the status of our faculty salaries relative to benchmarks, has tangible benefits for students, for the university, and for our faculty and staff.

IV. Next Steps

At the meeting with department heads and associate/assistant deans on July 25, it was generally agreed that the next steps should be the following:

1. Produce a summary document outlining the current status of the proposal (this document);

2. Present the concept at the University Senate, emphasizing that the idea will be further refined through other activities (see items 3 through 5).

3. The Senate could, at its discretion, explore this concept further through committees such as the Academic Quality Committee and the Faculty Welfare & Professional Responsibilities Committee;

4. Hold a set of faculty forums at the college level, in which the concept could be developed further, and strengths and limitations noted;

5. While not seeking to duplicate any effort under item (3), assemble a task force, with appropriate representation of faculty, staff, and students, to further explore literature and best practices in the area of accelerated learning in a compressed term format, and to make recommendations as to its possible implementation at WKU.

In parallel with these activities, department heads may explore ways to implement the offering of a greater number of courses in the bi-term format, in order to more reliably and empirically ascertain the advantages/disadvantages of the accelerated learning mode. If a sufficient migration to a bi-term format occurs, then a more formal reassessment of the academic calendar could then be explored.

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