
Reduction of Academic Costs



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Introduction

During the past two years, the University of Missouri System has incurred significant reductions in State budget allocations and this trend is expected to continue for several more years. A former State budget director argues persuasively that the State budget has structural problems and the trend of reduced budget allocations for higher education will not be alleviated by an economic turnaround. Therefore, it is not only necessary for the University to respond to the immediate fiscal shortfalls, but it is also prudent for the University to plan to operate under marginal fiscal conditions for some time.

An immediate response by the University to address the FY 2002 withholdings was to implement an early retirement program that will reduce the size of the faculty workforce in the short term. There was a ten percent reduction in the core FY 2003 budget, and projections seem to indicate that the State will be unable to restore the University's core budget for some time. As a result, the University will be forced to operate with a smaller faculty workforce in the long term in order to maintain budget equilibrium, even though at the same time the University will encounter record levels of student enrollments and greater demands on the faculty.

The Task Force on Reduction of Academic Costs was formed to address current and future fiscal conditions. The specific charge of the task force was to:

1. Review the instructional costs associated with programs with low enrollments and/or completions. As part of the review, the task force should examine a variety of productivity measures, including the student credit hours, research and public service funds generated per faculty member. The task force should calculate the cost savings associated with the consolidation, discontinuation, or other recommendations for low enrollment degree programs.
2. Review duplicated programs, particularly those that are high cost or unnecessarily duplicated, across the four campuses of the University of Missouri. Calculate the cost savings associated with the elimination of a duplicated program, the impact of the program closure on State needs, and alternative means to provide access to a similar program for the affected students.
3. Review the faculty workload policy in the Collected Rules and Regulations (310.080) and similar policies for each campus. Consider variations in the workload policies together with the possibility of capping enrollments as a way to lower instructional costs and maintain academic quality.

Mission and Values of the University

The recommendations contained in this report were derived with the assumption that the University of Missouri should not deviate from its land-grant mission and will pursue its vision within an environment that fosters excellence, a core value listed in its strategic plan. Any recommendations contained in this report and associated actions must be referenced against the stated mission, vision, and values of the institution.

“The mission of the University of Missouri, as a land-grant university and Missouri's only public research and doctoral-level institution, is to discover, disseminate, apply, and preserve knowledge. It thereby stimulates learning by its students, and lifelong learning by Missouri

citizens, and advances the health and well-being and the intellectual, cultural, social, and economic interests of the people of Missouri, the nation, and the world.”¹

The University is distinguished from other public institutions of higher education in the State by its research mission. Its teaching and extension are grounded in the discovery of knowledge and in creative activity--the essence of University research. The emphasis on research is not only inherently important, but it also has a significant utility in agriculture, health and economic development, and it contributes to the overall enrichment of the quality of life.

Organization of the Report

This report is organized in four sections. The first section studies the cost savings from a financial perspective that could be realized through the closure of academic programs. The second section scrutinizes the program review process and includes recommendations to identify candidates for program closure, consolidation or merger, or substantive improvement. The third section examines the instructional capacity of the University of Missouri to determine if the campuses can accommodate higher enrollments with a reduction in the faculty workforce.

Finally, the last section of the report summarizes and compares various options for reducing academic costs covered in this report. The size of the faculty workforce is a major driver of academic costs, and operating with a smaller workforce is a common approach to several options proposed to reduce academic costs. Reducing the workforce through the closure of non-profitable academic units is not the most effective budget-cutting tool. The nature of the programs and the number of programs that would need to be eliminated in order to recover cost savings of the magnitude commensurate with the reductions in the State budget would seriously jeopardize the public, land-grant mission of the University of Missouri. Although the closure of some programs will be critical in creating future programmatic opportunities, it is recommended that the University immediately focus on several alternative approaches. These approaches include instructional productivity, consolidation or merger of academic units, examination of costs in academic administration, and scrutinization of the investments in the research enterprise, both in institutionally supported programs and the waiver of facilities and administrative cost recovery (F&A) from grants. Otherwise, if the University community continues to operate “as is” in the current fiscal environment, the University will have to make very difficult and mission-changing choices.

¹ Board of Curators and Coordinating Board for Higher Education approved mission statement for the University of Missouri System.

Section 1: Cost Savings Related to Program Closure

Most businesses scale back their operations and reduce operating costs as a means to adjust to a revenue shortfall when there is less demand for their products and services. It is not surprising then that many expect higher education to similarly scale back its operation (i.e., offer fewer degree options and support fewer academic programs) when the University experiences a revenue shortfall. The irony is that the revenue shortfall experienced by the University of Missouri is directly attributable to a reduced State subsidy despite having record student enrollments, large increases in research funding, and a high demand for its services.

Even in the face of high student enrollments, the University must consider trimming its degree program offerings as a means to scale back its academic operating costs. The subsequent analyses considers a variety of factors, such as costs, revenues, and service instruction provided for other academic units that must be considered in calculating the cost savings associated with the closure of colleges, schools, or departments. These analyses provide estimates for the cost savings associated with program discontinuance; how many programs or academic units² would need to be closed to bring the reduced State appropriations into budget equilibrium; and the overall impact of the program closures on the functioning of the remaining academic units.

Academic Costing

There are a variety of direct and allocable costs associated with each academic unit. Some of these costs are inflexible, such as the cost of library resources, and other costs are shared, such as academic support services. Table 1 describes four tiers of costs with assumptions that vary from direct costs associated with the program (Tier 1 costs) to costs that are indirectly linked with an academic unit (Tier 4 costs). Salaries and wages of the faculty and staff employed by the academic units are the primary cost driver for Tier 1 costs. The analyses assume that the cost savings associated with the discontinuance of an academic unit can be estimated, at a minimum, by Tier 1 costs (primarily salaries and wages) and, at a maximum, by the sum of Tier 1 and Tier 2 costs. The costs described in Tier 3 and 4 would continue even if the department was discontinued, and savings would only be realized if a campus was closed.

Service Instruction

Another factor that needs to be considered in the recovery of academic costs through closure is the service instruction provided by academic units for each other. Some service instruction is used as required courses for other academic programs, as elective courses for other units, and often constitutes a major component of the general education curriculum that provides the academic background for all students in every academic unit. If an academic unit is closed and the faculty and the staff in the unit are discontinued, the remaining academic units assume additional costs associated with replacing the instruction (required courses, general education, and elective courses). Obviously, in some cases the remaining academic units would incur no additional costs if the service course was no longer offered, such as restricting the elective courses available to students. However, required courses in a degree program and general education courses will need to be offered and the remaining academic units will most likely incur some or most of these additional costs. The additional costs to the remaining academic units were estimated by calculating the subsidy provided by the campus to cover the costs of the service instruction scaled by the amount of service provided by the discontinued unit. In other words, the additional costs assumed by the remaining academic units will vary by the cost of the instruction and how much was provided by the closed academic unit. Only 50% of the service replacement cost was used in the model to estimate the variety of ways the remaining academic units would accommodate the increased obligations for instruction. The amount of service

² The smallest organizational level in which people, costs, and students can be directly attributed defines an academic unit.

replacement costs for many departments are negligible, but for some departments it is much higher, as high as \$2.3 million for biological sciences.

Table 1: Academic Costing
<p>Tier 1 Costs:</p> <ul style="list-style-type: none"> ▪ Direct instructional program costs supported from General Operating funds ▪ Other direct school/college costs - include General Operating funds used to support instruction, service, and research not included in the above ▪ Allocable primary program costs ▪ Direct scholarships – scholarship expenditures ▪ Direct support – institutional and academic
<p>Tier 2 Costs:</p> <ul style="list-style-type: none"> ▪ Allocated scholarship costs ▪ Building maintenance ▪ Academic support (10%) – (partial) does not include libraries. ▪ Student services (10%) – (partial)
<p>Tier 3 Costs:</p> <ul style="list-style-type: none"> ▪ Libraries ▪ Academic support – remainder (90%) of school or college academic support not included in Tier 2 costs above ▪ Student service – remainder (90%) of school or college student services expenditures not included above ▪ Institutional support
<p>Tier 4 Costs:</p> <ul style="list-style-type: none"> ▪ Allocated system overhead and depreciation ▪ Campus depreciation
<p>These costs and associated revenues are based on the report: “Full-Cost of Academic Divisions, Colleges, and Schools, Fiscal Year 1999 – 2000” and the “National Study of Instructional Costs and Productivity, FY2000”.</p>

Immediacy of the Costs Savings

The recovery of academic costs from closing an academic unit will not be immediate. The University has an obligation to the students currently enrolled in the degree programs offered by the academic unit and to faculty as set forth in the Collected Rules and Regulations. It is anticipated that cost savings related to program closure would be nominal for the first two years and much of the direct costs would be eliminated within four years, as the program is closed.

Additional Assumptions

Several additional assumptions related to shifting enrollments have been made in a model that estimates cost savings from closing academic units. When an academic unit is discontinued, existing or future students may elect to attend another university for access to the degree programs previously offered by the discontinued academic unit. In this case, there is a loss in revenue related to student fees. If existing or future students continue to attend the University, there will be a revenue source, but there will also be costs related to students enrolling in the remaining degree programs. If academic units can absorb the new student base as marginal enrollments, the revenue will continue with little increase in instructional costs. However, if the new enrollments are substantial, and depending on the academic program, the remaining academic units can incur significant new costs. For example, if former history majors now enroll in engineering because the history department was closed, this shift in enrollment would add significant new costs. Since it is impossible to model all combinations of revenue and costs associated with different patterns of enrollment shifts due to the closure of a program, the model simply assumes that overall shifting enrollments are cost and revenue neutral. In general, student fees do not cover all instructional costs incurred by the academic unit and this will be a future liability for the remaining academic units in which students may enroll.

The model does not include in its calculation any financial information related to external grants. The actual grant dollars are restricted and can be used only to support additional faculty obligations in the academic unit. However, external grants do generate additional General Operating funds through F&A cost recovery that can be used to support some functions described in the various cost tiers. Since the flow of the F&A costs from grants is different by schools and colleges and for the different campuses, it is impossible to estimate the impact of losing this source of General Operating funds on a department-by-department basis. Therefore, it is important to note that the estimates of cost savings in Table 2 recovered by program closure does not factor in the loss of revenue associated with the F&A cost recovery from external grants. The University would lose this additional revenue stream when closing the academic unit and terminating the faculty and staff associated with the unit.

Another source of income to the University that has not been factored into this analysis is gift income. Many gifts, particularly from alumni, often support the activities of specific academic units. The close linkage between alumni and an academic unit often provides an opportunity to structure a gift to the University. These opportunities will be lost with the closure of a host academic unit.

Based on these assumptions, and estimates of Tier 1 and Tier 2 costs associated with each academic unit, student fee revenue, and making corrections for the amount and type of service instruction provided by the academic units on all four campuses, the potential savings were calculated for the discontinuance of each academic unit. One outcome of this analysis is shown in Table 2.

Table 2: Summary of Cost Savings for all Academic Units at the University of Missouri System		
Summary of Tier 1 Cost Savings:		
Group	N	Percent
Non-Professional Academic Units:		
With Revenue Exceeding T1 Costs	32	24%
With T1 Costs Exceeding Revenue	101	76%
Professional Schools:		
With Revenue Exceeding T1 Costs	2	
With T1 Costs Exceeding Revenue	6	
Summary of Tier 1 and Tier 2 Cost Savings:		
Group	N	Percent
Non-Professional Academic Units:		
With Revenue Exceeding T1 & T2 Costs	6	6%
With T1 & T2 Costs Exceeding Revenue	125	94%
Professional Schools:		
With Revenue Exceeding T1 & T2 Costs	0	
With T1 & T2 Costs Exceeding Revenue	8	
Note: The smallest organizational level in which people, costs, and students can be directly attributed defines an academic unit. Professional Schools include Dentistry, Law (2), Medicine (2), Optometry, Pharmacy, and Veterinary Medicine.		

The closing of some academic units would not result in any savings to the University, which means that the revenue generated exceeds the academic cost of the unit. Thirty-two of the 141 (24%) academic units generate more revenue than Tier 1 costs (minimum estimate of costs) or six (6%) of the academic units generate more revenue than the sum of Tier 1 and 2 costs (maximum estimate of costs).

Table 3 displays the amount of cost savings in a frequency format for those academic units that would generate some cost savings if closed. Using Tier 1 costs (minimum cost estimate) less estimated service instruction, 60 non-professional academic units (59%) would generate less than \$500,000 each if they were closed, or \$11.5 million dollars in total. Using Tier 1 plus Tier 2 costs (maximum cost estimate), closing about the same proportion of non-professional academic units would generate about \$44 million. Obviously, additional cost savings would be generated if higher cost units were closed.

Table 3: Distribution of Tier 1 and Tier 2 Savings, By Academic Unit			
Tier 1 Costs (Less Estimated Service)			
Group	N	Percent	Total Savings of Group
Non-Professional Academic Units:			
\$500,000 or Less	60	59%	11,459,215
\$500,001 - \$1,000,000	21	20%	15,395,212
\$1,000,001 - \$1,500,000	14	14%	16,792,405
\$1,500,001 - \$2,000,000	4	5%	7,102,010
More Than \$2,000,000	2	2%	5,711,329
Total	101		
Professional Schools:			
Less Than \$5,000,000	5	63%	3,992,832
More Than \$5,000,000	3	37%	34,044,486
	8		
Tier 1 and Tier 2 Costs (Less Estimated Service)			
Group	N	Percent	Total Savings of Group
Non-Professional Academic Units:			
\$500,000 or Less	38	37%	9,969,120
\$500,001 - \$1,000,000	34	32%	23,945,466
\$1,000,001 - \$1,500,000	23	23%	27,849,326
\$1,500,001 - \$2,000,000	12	12%	21,543,215
More Than \$2,000,000	18	18%	55,446,370
Total	125		
Professional Schools:			
Less Than \$5,000,000	5	63%	8,944,310
More Than \$5,000,000	3	37%	45,677,642
	8		
Note: Except with Professional Schools, excludes those academic units with revenues exceeding costs.			

\$40 Million Scenario

The University’s core budget was reduced by 10% in FY 2003, which translates to roughly a \$40 million reduction in State support. The University has already made adjustments in the FY 2003 budget to account for the withholdings received late in FY 2002 and the core reduction in FY 2003. The budget projections for the next several fiscal years are not any better for the University. At this time, these adjustments have not directly resulted in the closing of any academic units. Although the exercise outlined below to recover \$40 million from program closure is hypothetical, for many the cost savings in excess of \$40 million is a real possibility in order to fiscally sustain the University during the projected period of reduced State support.

Using a business approach and taking a financial perspective without consideration of the University's public mission and uniqueness to the State, how many academic units would need to be scaled back or closed to reduce academic operating costs to reach budget equilibrium with a \$40 million revenue shortfall? Based on either Tier 1 cost savings (minimum estimate of costs) less service costs or the sum of Tier 1 and Tier 2 costs (maximum estimate of costs), the University would need to close the three most expensive professional school programs to accumulate \$40 million in cost savings.

As one moves from a financial perspective and considers issues related to public mission and program uniqueness, the number of academic programs that would need to be closed to accumulate \$40 million in cost savings at the end of four years would increase dramatically. For example, one might exempt high cost professional programs from the analysis under the assumption that the University of Missouri has an unique obligation to deliver professional programs in the State. In a scenario that exempts professional programs, based on Tier 1 cost savings (minimum estimate of costs) less service costs, a minimum of 33 academic units need to be closed in order to accumulate \$40 million in cost savings. Using the sum of Tier 1 and Tier 2 costs (maximum estimate of costs), a minimum of 11 academic units would need to be closed to accumulate \$40 million in cost savings.

Similarly, one might suggest that other high cost programs should not be closed, such as engineering, journalism, and music, because of the uniqueness of these programs in the State. With these programs exempted, based on Tier 1 cost savings (minimum estimate of costs) less service costs, 84 of the existing academic units need to be closed in order to accumulate \$40 million in cost savings. Using the sum of Tier 1 and Tier 2 costs (maximum estimate of costs), a minimum of 17 academic units would need to be closed to accumulate \$40 million in cost savings.

This exercise demonstrates that either some unique and critical programs would have to be discontinued or a significant number of academic units would need to be closed in order to accommodate a \$40 million core budget reduction. Using program closure as an exclusive means to reduce academic costs and respond to reductions in State support will devastate the University's core operation of instruction, research and public service, which will severely restrict the capacity of the University to meet the educational and economic needs of the State.

Finally, when one weighs the direct and shared costs associated with all academic units against the loss of student revenue, the discontinuance of an individual or group of non-professional academic units does not generate much cost savings. If one is willing to close the library, sell campus buildings, discontinue general education, and offer very few degree programs; in other words, close the campus, significant costs can be recovered.

Duplicated Programs and Academic Units

One way to reduce the negative impacts of program closure is to eliminate duplicated programs, and more specifically, eliminate unnecessarily duplicated academic units. However, as recognized in the analysis, duplication should not be considered unnecessary if the same academic units on different campuses have high enrollments and provide a significant amount of service instruction to support the other academic units on campus.

Any duplicated academic units should be closely scrutinized even when the units have reasonable enrollments, but also have a high subsidy, produce little service instruction, and have low amounts of research and scholarship. Interestingly, the above analysis indicates that if the University closed the duplicated professional programs such as, medicine and law at UM- Kansas City, there would be no cost savings using Tier 1 costs, and less than \$1.3 million each using the sum of Tier 1 and Tier 2 costs. In other words, the duplicated professional programs at UM-Kansas City do not fall into this category since their revenues are commensurate with their costs.

Section 2: Program Assessment and Viability at the University of Missouri

Although closing academic programs may not be the most effective budget-cutting tool, this does not in any way undermine its importance in the management of a campus degree program inventory. The discontinuance of programs or academic units that provide little service, generate low enrollments, receive substantial University subsidy, and are not central to the mission of the campus, can generate resources that can be redirected to support high priority academic areas. Given the current and future fiscal climate in the State, it is prudent that the University of Missouri plan its future programmatic growth through substitution and by expansion with available resources. Moreover, the current and projected State budget shortfalls will result in a reduced faculty workforce that, along with increased enrollments, will reshape the degree program inventory. Some programs and associated academic units will need to either be consolidated or eliminated.

Best Practices on Program Review

The primary purposes for conducting periodic reviews of academic programs are to assess each academic unit's quality and effectiveness, to stimulate program planning and improvement, and to encourage the strategic development of an academic unit, in a manner that reflects the University's priorities.

The program review process gives a department the opportunity to complete a self-assessment, provide information on its perceived strengths and weaknesses, evaluate previous departmental planning and change direction if deemed necessary. The review allows the department to determine if its strategic plan is aligned with the University's mission and overall strategic plan of the institution.

Program reviews at higher education institutions have been shown to be important for the success of the institution. Some of the best practices include:

1. Direct involvement in the academic review process by senior campus administrators, such as the Provost and the Dean of the college.
2. Oversight of the program review by a campus committee containing both internal and external members. External members should be from either peer institutions or experts in the field.
3. Perception of the review process as an on-going strategic planning process, not primarily as a budget reduction measure, and as a regularly scheduled process for each academic unit every five to seven years.
4. Opportunities for improved communication among academic units, an appreciation of the University's different academic components, increased external visibility and accountability with the governing board and appropriate State agencies, national peers, and unit alignment within the institutional strategic plan and the overall mission of the University.
5. A thorough self-study is part of the review process. This self-study should contain, but not be limited to the following:
 - a. the strategic mission of the department and its relation to the college, campus, and University system strategic missions,
 - b. a statement of the current status and future direction of the unit/program that includes a description of unique aspects and comparative advantages,
 - c. an academic department/unit profile (e.g., including graduate and undergraduate enrollments, semester credit hours produced and faculty averages, number of full-time and part-time faculty and nature of appointments, degrees awarded, past and future enrollment trends, sources of revenue, etc.),

- d. a candid assessment of the overall quality and reputation of the department/unit that includes evidence of the department/unit's teaching, research and scholarship, and outreach efforts,
 - e. an assessment of the administrative structure and functions and their effectiveness.
6. Development of a summary report that includes a candid assessment of the department/unit's strengths and weaknesses, observations regarding any progress made since the last review, an evaluation of the department/unit's role in the strategic mission of the University, and recommendations for improvement.
 7. Development of a feasible implementation plan. The plan includes recommendations for improvement, specific agreed-upon actions, timelines, suggestions for measuring the success of meeting these expectations, and a clear articulation of parties who are responsible for each of these actions.
 8. Follow up in a year with an assessment of the progress the department is making on the implementation plan and on improvement.

The primary result of the program review should be to focus on the program's strengths, weaknesses, opportunities, threats, and to compare the unit against the University's strategic mission and planning processes, and define ways for the program to improve with the use of existing resources.

Internal Review of the Academic Program Review Process at the University of Missouri

The Office of the Vice President for Academic Affairs conducted an internal assessment of the processes used by the campuses for academic program review in February 2000. The resulting report included interviews with chief academic officers, deans, and department chairs. Although some academic units employed some of the best practices identified above, several themes inconsistent with best practices pervaded these discussions. These themes included:

1. Program reviews tended to be retrospective in nature and not focused on future planning.
2. The reviews tended to be non-participatory processes, and were often prepared only by the department chairs.
3. Reviews appeared to be done for "someone else"; consequently, there was little ownership by the department or the academic unit.
4. Many believed that the purpose of a program review was to "protect" the unit and not to provide the unit direction and purpose in the future.
5. Finally, the review process seemed redundant and little, if any, value was added as the review moved from the department, to the dean, to the chief academic officer, to the University System, and to the CBHE.

Multiple Purposes and Outcomes of Program Review

The purpose of a periodic review is to assess each academic unit's quality and effectiveness, to stimulate program planning and improvement, and to encourage the strategic development in alignment with campus priorities. However, given that the campus manages its degree program inventory with limited resources, for some academic units, the appropriate discussion should be focused less on program improvement, but more on the unit's future viability, return on investment of current academic costs, and contribution to the overall mission of the campus. In those cases, the program viability audit is a more appropriate review.

A program viability audit process should be separate and distinct from the traditional program review process, as the purposes of these two reviews are different. Traditional program reviews are designed as a summative evaluation of a program and to make recommendations for on-going and regular improvements with existing resources. A program's frank disclosure of problems with diligent efforts to improve them should be viewed favorably, particularly if substantial progress has been initiated.

On the other hand, a program viability audit is designed to determine whether a program or an academic unit should be consolidated, merged with another unit, suspended, or in some cases, discontinued. The audit should focus on the cost margin of the academic unit (program costs and cost recovery through a number of sources, such as grant revenues, semester credit hours generated, gifts, etc.), its quality of programs, and its intrinsic importance and comparative advantage to the campus.

The discussions about possible program consolidation, merger, suspension, or discontinuance, tend to occur during lean fiscal periods as a means to cut operating costs. However, a regular, on-going process that identifies potential academic programs or units as candidates for a program viability audit should be in place to enable campuses to manage opportunity costs associated with continuing non-critical academic units and programs.

The Role of the University of Missouri System in the Program Review Process

Decisions about the degree program inventory must primarily be driven by discussions at the campus level and led by appropriate individuals on the campus. These individuals can best manage the limited fiscal and faculty resources to optimize the trade-off between programmatic capacity and quality. The role of the University System is to ensure that functional review processes are in place on each campus. Given that the State of Missouri through the CBHE mandates program reviews for all Missouri higher education institutions, the other role of the University of Missouri System is to coordinate the review process on the campuses with the CBHE.

Principles for the Revision of the Program Review Process

Recommendations for the revision of the current program review policy are based on the following principles:

1. There should be separate processes for a program assessment and a program viability audit.
2. The purpose of program assessment is to assess quality and effectiveness of an academic unit, and to promote program improvement through the strategic planning that reflects campus planning priorities.
3. The purpose of a program viability audit is to determine whether a program or academic unit should be modified, merged with another unit, suspended or discontinued.
4. A regular process should be developed to identify possible candidates for a program viability audit. Academic costs and revenue should be one factor employed in the identification process.
5. The leadership on the campuses can best manage the limited fiscal and faculty resources to optimize the trade-off between programmatic capacity and quality, and are in the best position to manage the program assessment process, identify candidates for a program viability audit, and make decisions concerning academic programs and units.
6. The role of the University System is to ensure that functional review processes are in place on each campus and provide support for a regular process to identify candidates for a program viability audit. The University of Missouri System should also coordinate the program assessment and viability audit processes on the campuses with the appropriate State agencies.

The proposed revision to the program review procedures is shown in Appendix 1.

Section 3: Instructional Capacity at the University of Missouri

The current and extended budget conditions are forcing the University to reduce the size of its faculty workforce even though the University will probably encounter record levels of increased student enrollments during the period. The co-existence of higher enrollments and a reduced faculty workforce necessitates an examination of the overall instructional capacity of the University of Missouri:

1. Does the University of Missouri have the instructional capacity to accommodate a reduction in faculty workforce during a period of increased enrollments?
2. Does the University need to revise its current workload policy?

Although it will eventually depend on the specific disciplines and academic areas most impacted by early retirements, the data do support the general conclusion that instructional capacity does exist at the institutional level, but varies by discipline, to accommodate projections in workforce reductions and increased student enrollments. This capacity can be tapped and better managed to support the mission of the University through a revision of the faculty workload policy.

The review of the workload policies at other higher education institutions revealed that some universities have not codified a faculty workload policy. The formal workload policies from other universities vary in type, and in the uniformity of their application to all faculty. These policies also differ in the focus of the decision for the instructional component of faculty workload (i.e., at a faculty or department level). The instructional component of the faculty workload policy for the University of Missouri is stated at a campus level.

Based on its review of workload policies from other institutions, the projected instructional gap due to a reduced faculty workforce and higher student enrollments, and the review of the current workload policy at the University of Missouri, the task force proposed a revised faculty workload policy based on the following principles:

1. The policy should not endorse a “cookie-cutter” approach for all faculty, but should provide the flexibility to allow faculty talents to be used differently to achieve the mission of the academic unit.
2. The workload policy must articulate the instructional expectations for faculty within a flexible framework to assign effort in teaching, research, and service.
3. All types of instruction, including off-campus, off-schedule, and independent study instruction should be considered as part of the instructional effort of a faculty member.
4. There should be a general recognition in a workload policy for the increased effort required to support a quality academic experience in larger classes.
5. Student credit hour production, as compared to the number of sections or number of section credits, needs to be acknowledged as an important academic cost factor to be balanced and managed at the unit level.
6. Accountability for the implementation of a workload policy, especially the assignment of instructional efforts of the faculty, should rest with the dean or unit director at the college and school level.

The task force proposes revisions to the current faculty workload policy for the University of Missouri (Collected Rules and Regulation 310.080) according to the principles above. In addition, the task force proposes that the University establish instructional waivers that will be issued by deans and comparable unit directors whenever a faculty member is to be assigned less than 12 section

credits or 180 student credit hours for the academic year. The proposed revision to the faculty workload policy is shown in Appendix 2.

The implementation of the proposed workload policy does not necessitate an increase in the instructional workload for all faculty as an approach to address higher student enrollments with fewer faculty. Rather, the revised policy provides the means to best manage the instructional productivity within the context of the faculty members overall workload and institutional priorities, which includes research and scholarship, and service, all of which are important to the economic viability of the State. However, some faculty will need to teach more regardless of previous arrangements.

Section 4: Alternatives to Program Closure

The financial analysis on program closure demonstrated that the complete reliance on program closure to reduce costs would seriously jeopardize the public mission of the University of Missouri. Although exclusive use of closing academic programs may not be the most effective budget-cutting tool, it is critical that the University improve its processes to examine the viability of academic units to generate resources that can be redirected to support high priority, future growth areas.

If not by program closure, by what other means can the University reduce its academic operating costs? Below is a list of alternatives to reduce academic costs.

Unfunded Research Expenditures

The University of Missouri needs to examine the amount of General Operating funds used to support individual research projects as well as research centers. During these fiscal times, established research centers should be self-supporting through the generation of external funding. In addition, the University needs to scrutinize research projects with little or no F&A cost recovery and review its policies that permit a waiver of allowable F&A costs from Federal and State grants. As research funding increases, the University incurs additional financial obligations associated with conducting the research that is covered by the General Operating budget. With the increased costs associated with more research funding, and the reduction of the General Operating budget due to State budget cuts, it is even more critical that the University recovers a greater portion of F&A costs on a grant. Otherwise, the University will need to examine if it can afford to conduct the research. A 25% reduction in General Operating funds supporting research, and a 50% increase in the recovery of allowable F&A costs, either through a greater yield of allowable costs or through changing the mix of agencies funding the research would generate approximately \$10 million in additional revenue, which could be equivalent to the cost savings associated with closing up to 60% of the non-professional academic units.

Salary Encumbrance on External Grants

Another option is to encourage faculty who receive external grants to budget a larger portion of salary covered by the grant, thereby reducing the fraction of salary encumbered by General Operating funds. Currently, almost nine percent of the salary of ranked faculty is covered by restricted funds generated by external grants. If the proportion would increase by an additional five percent, this would result in a cost savings of \$7.8 million, which is equivalent to the cost savings associated with closing five professional academic units. This shift in the relative proportion of the salary encumbrance between General Operating funds and external grant funds is consistent with the fact that many faculty with external funding would be expected to generate less revenue through academic instruction.

Academic Administration

Academic administrative costs are also an integral part of the overall academic costs. As such, any increases in administrative costs in the academic units needs to be reviewed as part of an overall review of academic costs. If there was a 10% reduction in academic administrative costs, there would be a cost-savings of \$3.4 million, which is equivalent to closing 21 non-professional academic units. Some costs associated with academic administration can be defrayed if the academic administrator generates research funding or student fee revenue through instruction. In many cases, an academic administrator is a tenured-faculty member who will return to and contribute to their home academic department if the administrative position was discontinued.

Financial Aid

The total funds devoted for scholarships and fellowships in FY 2001 was \$105 million, of which \$76 million (72%) was from General Operating funds. If the University reduced its reliance on General Operating funds to support financial aid from 72% to 50%, this would be a cost savings of \$23 million, which could be equivalent to the cost savings of closing the colleges of Arts and Sciences at UM-Kansas City and UM-Rolla. The University has substantially raised fees in the past year, and should not reduce its overall financial aid awarded but support less with General Operating funds and more from private and endowed funds.

Instructional Productivity

The University can realize about \$12 million in additional revenues with a 5% reduction in the faculty workforce coupled with a 5% increase in student enrollments (the faculty workforce can be reduced about 8.5 – 9% through early retirements, and current enrollment figures for the University System seem to be higher than 5%). This cost savings assumes an increase in instructional productivity for the remaining faculty to accommodate the greater number of students with increased student revenues. If the proposed revision in the faculty workload policy is fully implemented there would be capacity for an additional 3% increase in student enrollments with the no change in the number of faculty.

Twelve million dollars in cost savings realized from increases in instructional productivity would be equivalent to closing three colleges and schools of education within the University of Missouri System based on the program closure analysis. Clearly, improving instructional efficiency and productivity can support a full complement of programs yet cover a significant budget shortfall.

Program Merger or Consolidation

Cost savings realized through increases in instructional productivity are based on the assumption that faculty are interchangeable for the purposes of instruction, which, in general, may be difficult to achieve. However, a good vehicle to create instructional flexibility among the faculty is the merger or consolidation of similar academic units. A more flexible approach in the delivery of similar, but separate curricula, can promote the interchangeability of faculty and significantly reduce academic costs. Moreover, additional administrative cost savings may be realized when programs are consolidated or merged. Although the actual cost savings realized through the merger of different academic units is difficult to estimate because it depends on which units are being combined and the nature of the interaction between the units, combining academic units can create instructional flexibility to support the significant cost savings realized through instructional efficiencies.

Concluding Remarks

Although the University has responded to the immediate fiscal shortfalls, it is critical for the University to plan to operate under marginal fiscal conditions for some time. This report makes several recommendations on how to best manage academic costs during this lean fiscal period. For some, the incentive to fully explore the potential impact and ramifications of these recommendations will depend on “how much we need to cut.” Some would argue that a ten percent core budget cut should be accommodated by administrative efficiencies and staff reductions, while others would say that the academic side of the institution has been exempt from past budget cuts and “should take its turn” for this current round of budget cuts.

The fact of the matter is that the magnitude of the budget shortfall is the largest in recent history of the University, and both academic and administrative units will have to improve efficiencies and operate with fewer people. It is also important to remember that it is unlikely that a core budget request recommended by the State will include cost-to-continue (e.g., inflationary) increases. The financial planning assumptions for the University of Missouri System include provisions for a 4% increase in salaries and wages, which translates to roughly an additional \$20 million that will need to be reallocated through cost savings in both academic and administrative areas. It is absolutely essential that we provide increases in salary and wages for many reasons, but especially when we may be asking fewer people to do more. Simply stated, the University community cannot escape making critical choices in managing its academic costs.

The University community may elect to operate with a “business as usual” mentality in the current fiscal environment. If so, the faculty workforce will need to be reduced through dramatic program closure. Program closure as an exclusive means to reduce academic costs will devastate the University’s core operation of instruction and research, change its public mission, and severely restrict the capacity of the University to meet the educational needs of the State. It will be both financially expensive and costly to the University mission to maintain the status quo in terms of methods of instruction, lock-step curricula, and independently operating academic units.

A related choice is to “privatize” to the extent that student fees are raised significantly to fully cover academic costs. Some suggest that this may be the trend for higher education in the State and nation. However, we must recognize that this is a mission-changing choice.

Another choice is to strive to create the capacity with a reduced workforce to deliver a high quality, full complement of degree programs indicative of a public, land-grant institution. To achieve this, the faculty will need to entertain flexibility in their curricula, the sharing of faculty expertise from similar disciplines, and differentially deploying their talents in teaching, research, and service. The challenge will be for the University, during lean fiscal periods, to deliver quality instruction in new and innovative ways, sustain its research enterprise, and provide service, all with fewer faculty, to a greater number of students, offering a comprehensive degree program inventory of an institution with a land-grant mission.

The Task Force on the Reduction of Academic Costs explored a variety of choices to sustain the mission of the University during a projected period of budget shortfalls. The choices included in the report are not meant to be exhaustive, and the task force recognizes that there are other viable approaches to reduce academic costs. The purpose of the task force report, with its analyses of the advantages and disadvantages of various approaches to reduce academic costs and by its recommended changes in the faculty workload and program review policies, is to engage the University community in critical discussions that lead to specific actions to deal with budgetary shortfalls.

Appendix 1: Program Assessment and Viability Audit

Executive Guideline No. xx

20.0xx Program Assessment and Viability Audit

1. PROGRAM ASSESSMENT

Each department, center, and institute will undergo a cyclic process of assessment for the purpose of improving the quality of the educational opportunities provided by the academic unit. The assessment will include any degree programs offered by the department. The department faculty should assess the processes developed through its planning efforts to improve student learning, to enhance the impact of its research and scholarship on the discipline, and to link its service activities with the needs of the campus, discipline, and the community. The assessment should also determine if the planning at the academic unit is aligned with the campus strategic plan.

- a. The campus determines the procedures and format of the program assessment.
- b. The Office of the Vice President for Academic Affairs will provide coordination with the program review process of the CBHE. The Office of the Vice President for Academic Affairs will provide summary reports to the CBHE according to a mutually agreeable five-year cycle for each degree program. The summary report submitted to the CBHE must contain the following summary information:
 - i. Name of the degree program and name of the department responsible for administering the degree;
 - ii. Statement concerning program mission;
 - iii. Distinguishing characteristics of the program;
 - iv. Trends in student enrollments and degree completions;
 - v. Scholarship activity and public service.
- c. The Office of the Vice President for Academic Affairs will examine, on a rotating basis, the assessment process on each campus according to established best practices. Each campus process will be examined once every four years.

2. PROGRAM VIABILITY AUDIT

The management of the degree program inventory will at times require the elimination or consolidation of degree programs and associated academic units in order to optimally direct limited faculty and other resources to meet the dynamic educational needs of students in Missouri. The purpose of a program viability audit is to determine if a selected degree program or academic unit should be, modified, consolidated with another degree program and/or academic unit, suspended, or discontinued. The Chancellor or her or his designee will determine which programs or academic units should undergo a program viability audit.

- a. **PROCEDURES TO IDENTIFY CANDIDATES FOR A PROGRAM VIABILITY AUDIT**
 - i. The Office of the Vice President for Academic Affairs will generate an annual report on academic costs and revenues, enrollment trends, degree completion rates, percentage of service courses, and relationship between institutional and external support for research and scholarship. Based on the academic profiles derived from the annual report, the Office of the Vice President for Academic Affairs will generate a list of academic programs or departments that are potential candidates for a program viability audit.

- ii. The list will be submitted to the Chancellor and reviewed in relation to other quality and centrality indicators. The Chancellor may elect to add other degree programs to be reviewed based on other criteria, including the outcome of a program assessment.
 - iii. The Chancellor will notify the Vice President for Academic Affairs which degree programs and associated academic units were selected to participate in a program viability audit.
- b. PROCEDURES TO CONDUCT A PROGRAM VIABILITY AUDIT
- i. A standing committee on each campus will conduct a Program Viability Audit. The Program Viability Audit (PVA) committee will include representation from academic administration, faculty, and the Office of the Vice President for Academic Affairs (ex-officio). Each campus will determine the specific membership.
 - ii. The charge of the PVA committee will be to review the academic profile of the programs and academic units selected for an audit, compile and review other pertinent and related information and make recommendations to the Chancellor and the chief academic officer concerning the program and/or academic unit under review.
 - iii. The PVA committee should examine, but is not limited to, the following criteria during a viability audit of an academic unit:
 - 1) Quality of faculty and students;
 - 2) Outcomes of instruction, research, and outreach activities;
 - 3) Student demand and State need for the affected programs;
 - 4) Centrality to the mission of the campus and the University of Missouri;
 - 5) Comparative advantages or uniqueness of the program;
 - 6) The adequacy of resources to support the program and other financial considerations.
 - iv. If there are significant changes, the PVA committee may recommend to the Chancellor that the program or academic unit should be placed on probationary status for a fixed time period with an outcome-based improvement plan, modified, consolidated with another program, suspended, or discontinued. Cooperative programs with other campuses should be explored as part of the recommendation to the Chancellor.
 - v. A program or academic unit under suspension will not admit any new students, but will continue to provide instruction to students who are already enrolled in the program. The program will automatically be discontinued if it is suspended for more than five years.
 - vi. Based on the review and recommendations of the PVA committee, the Chancellor makes the final decision on the actions taken concerning the affected degree program and/or academic unit. The Chancellor will report the actions to the Office of the Vice President for Academic Affairs.
 - vii. The Office of the Vice President for Academic Affairs will submit to the President an annual report on the list of potential candidates for program viability audit, the list of candidates selected by the Chancellor for the program viability audit, and the final disposition for each affected program for each campus.

Appendix 2: Proposed Revision in Faculty Workload Policy at the University of Missouri

FACULTY WORKLOAD POLICY (PROPOSED)

310.080 REGULAR FACULTY WORKLOAD POLICY

- A. In consultation with the faculty member, the department chair or unit director, with the approval of the Dean will determine faculty assignments and distribution of effort across teaching, research and service for each regular faculty member. The department chair should determine the distribution of faculty effort so as to best deploy the talents of the collective faculty to attain the instructional, research and scholarship, service, and clinical objectives of the academic unit. The distribution of effort for tenure-track faculty members during their probationary period should be commensurate with the departmental, college, and campus standards for tenure and promotion. The annual compilation of activities in relation to the distribution of effort will provide the basis for the annual review of a faculty member.
- B. The instructional component of a typical distribution of effort on average includes the assignment as primary instructor for 18 section credits or the generation of 270 student credit hours per academic year (i.e., Fall and Spring semesters). Excluding instruction that is considered extra compensation, all forms of instruction, including off-campus, off-schedule, and independent study courses, should be included in the calculation of instructional productivity. Faculty whose workload emphasizes research and scholarship or service may teach fewer than 18 section credits or generate less than 270 student credit hours. Faculty with an instructional emphasis would be expected to teach more section credits or a higher number of student credit hours to meet the instructional needs of the academic unit. With the approval of the chief academic officer of the campus, the Dean will determine the instructional workload for a faculty member with administrative duties. Professional schools should modify the instructional benchmarks depending on the currency used to monitor clinical instruction and clinical supervision.
- C. No regular faculty member can be assigned fewer than 12 section credits or less than 180 student credit hours per academic year without being issued an instructional waiver, which requires the approval of the appropriate Dean or unit director. Examples of reasons to grant an instructional waiver would include the additional obligations incurred by a faculty member through a funded project, a research or developmental leave, the assignment of special duties that would constitute 50% or more effort, the advisement of a large number of doctoral and master's students, or appropriate personal or medical reasons.
- D. Statistical reports on instructional productivity of regular faculty will be compiled on an annual basis for each college and school. The report will include the number of instructional waivers issued and an analysis of the rationale provided for granting the waiver during the academic year. The reports on faculty instructional productivity will be shared with the Chancellor and the President.