College for all Texans

Texas Higher Education Coordinating Board

Texas Public University Cost Study

FY 2005 - FY 2007

October 2008

Division of Planning and Accountability
Finance and Resource Planning

Texas Higher Education Coordinating Board

Robert W. Shepard, CHAIR	Harlingen
A.W. “Whit” Riter III, VICE CHAIR	Tyler
Elaine Mendoza, SECRETARY OF THE BOARD	San Antonio
Charles “Trey” Lewis III, STUDENT REPRESENTATIVE	Houston
Laurie Bricker	Houston
Fred W. Heldenfels IV	Austin
Joe B. Hinton	Crawford
Brenda Pejovich	Dallas
Lyn Bracewell Phillips	Bastrop
Robert V. Wingo	El Paso

Raymund A. Paredes, COMMISSIONER OF HIGHER EDUCATION

Mission of the Coordinating Board

The Texas Higher Education Coordinating Board’s mission is to work with the Legislature, Governor, governing boards, higher education institutions and other entities to help Texas meet the goals of the state’s higher education plan, *Closing the Gaps by 2015*, and thereby provide the people of Texas the widest access to higher education of the highest quality in the most efficient manner.

Philosophy of the Coordinating Board

The Texas Higher Education Coordinating Board will promote access to quality higher education across the state with the conviction that access without quality is mediocrity and that quality without access is unacceptable. The Board will be open, ethical, responsive, and committed to public service. The Board will approach its work with a sense of purpose and responsibility to the people of Texas and is committed to the best use of public monies. The Coordinating Board will engage in actions that add value to Texas and to higher education. The agency will avoid efforts that do not add value or that are duplicated by other entities.

The Texas Higher Education Coordinating Board does not discriminate on the basis of race, color, national origin, gender, religion, age, or disability in employment or the provision of services.

TABLE OF CONTENTS

Page

Executive Summary 1
Background 2
Instruction and Operations Formula Funding 2
Results of the Cost-Based Methodology 5
Analysis by Discipline 6
Total, Full-Time Student Equivalent Comparison 7
Discipline Analysis, Average Cost per Semester Credit Hour Basis, by Institution 8
Conclusion 9

APPENDICES

Appendix A – FY 2005 – FY 2007 Sum of All Costs at Public Universities and Sum of All Semester Credit Hours at Public Universities 11
Appendix B – Calculated Weights and Calculated Relative Weights 12
Appendix C – FY 2005, FY 2006, and FY 2007 No Phase-In Distribution of Formula Funding .. 14
Appendix D – Formula Hold Harmless Amounts Appropriated by the 80th Legislature for Universities 15

TABLES

Table 1 Instruction & Operations Matrix (FY 2008 – FY 2009 Biennium Appropriations Bill).... 4
Table 2 Cost-Based Instruction and Operations Matrix, FY 2005 – FY 2007 Data..... 4
Table 3 Variance, FY 2005 – FY 2007 Cost-Based Matrix to FY 2008 – FY 2009 Appropriations Bill..... 5
Table 4 FY 2007 Average Total Cost Per Full-Time Student Equivalent (FTSE) 7
Table 5 FY 2007 Average Total Cost per Semester Credit Hour per Discipline 9

Executive Summary

For many years, the Texas Higher Education Coordinating Board tried to determine how much public universities spend to provide instruction by discipline and by level of instruction. Previous attempts at developing such a cost study were unsuccessful. In the latter part of the 1990s, then State Senator Bill Ratliff developed and implemented an instruction and operations matrix that was intended to represent the statewide average cost of instruction for the various disciplines and levels offered at Texas public universities. However, no documentation has been available to validate the matrix elements.

In 2002, the Coordinating Board directed its University Formula Advisory Committee to renew efforts to conduct a cost study to validate the relative weights contained in the matrix. This report provides a summary of the results of the study. The methodology was developed and presented to the Coordinating Board at its April 2004 quarterly meeting, where it was unanimously adopted. The methodology was then presented to the Governor's Office, the Legislative Budget Board, and various legislative committees in June 2004. Since then, the Coordinating Board staff has collected and analyzed data to provide an "all funds" analysis of Texas public university costs. All costs are based on data in each institution's Annual Financial Report. Naturally, this analysis revalues the relative weights, which in turn reallocates the Instruction and Operations formula funding among the universities.

A majority of the University Formula Advisory Committee and the Coordinating Board members believe that it is imperative the relative weights contained in the Instruction and Operations matrix reflect an objective analysis of universities' actual costs. This is not intended to mean the cost-based methodology should be the final word on how funds are distributed. For example, workforce shortage issues in nursing and other fields may require special funding decisions. However, to maintain the objective nature of the cost-based analysis, any special treatment should be separate and apart from this determination. This approach will significantly improve accountability and transparency related to expenditures at universities.

This report is based on data from Fiscal Years 2005, 2006, and 2007, the most recent available data for use in calculating the three-year average used to produce the final relative weights for the matrix.

The following report is divided into two sections. The first section provides an overview of the cost study process, formula funding for Instruction and Operations (I&O), the calculation methodology used to determine the relative weights, and the results of those calculations. The second section explains how this methodology is used to develop a comparative analysis, by institution, of the various disciplines.

Texas Public Universities

Formula Funding Cost Study FY 2005 through FY 2007

Background

In the summer of 2002, a workgroup[1] was appointed by the University Formula Advisory Committee to develop a methodology to verify the relative weights in the university Instruction and Operations (I&O) matrix. This workgroup operated under the auspices of the University Formula Advisory Committee (UFAC), which was responding to requests by the Coordinating Board and the Legislature to develop a cost-based methodology for determining the relative weights. The cost-based methodology would not only provide an objective starting point for distributing I&O formula funds, but it also would be a mechanism capable of informing the Legislature about how the universities spend their funding, not only from the Legislature but from all sources of funds, except for Auxiliary Funds. Auxiliary Funds are those recorded by self-sufficient enterprises which provide services to students, faculty, or staff and charge a related fee. Examples include intercollegiate athletics, food services, housing, and book stores. It is illegal to spend state funds on Auxiliary Enterprises, which is why they are excluded from this study.

Instruction and Operations Formula Funding

Approximately 55 percent of total state funding to the universities is distributed using the relative weights through the Instruction and Operations formula, and all institutions receive the same amount of funding per semester credit hour (SCH) for any given level and discipline. Total state funding represented 34 percent of total universities' revenues in FY 2007. The initial weights, used through FY 2005, were developed in 1997 by then State Senator Bill Ratliff, Chairman of the Senate Finance Committee, as a means to simplify the complex system of 12 formulas that had been used to distribute funding to the institutions for Instruction, Operations, and Physical Plant Operations and Maintenance.[2] Unfortunately, neither the relative weights developed by Senator Ratliff, nor the previous 12 formulas, were based on actual costs. One goal of this study was to develop relative weights that truly reflect the universities' relative costs of operation.

Mathematically, the weights in the matrix are intended to represent the ratio of total educational costs to total SCHs, by level (lower-division and upper-division undergraduate, master's, doctoral, and special professional) and discipline (liberal arts, science, etc.). In addition to the five levels, the Instruction and Operations matrix contains relative weights for 20 disciplines (excluding Developmental Education). The Instruction and Operations formula distributes funding by multiplying a rate ($59.02 for the 2008-2009 biennium) by the number of SCHs for a given level and discipline (e.g. lower-division liberal arts) by the relative weight assigned to that level and discipline. Usually, the relative weight for science or engineering at a given level should be greater than the relative weight for liberal arts because faculty salaries and research expenses are higher in science and engineering than in liberal arts. The remaining

[1] The workgroup consisted of Mr. Phillip C. Diebel, Vice Chancellor for Finance, University of North Texas; Mr. Mike Ferguson, Vice President for Finance & Operation, Lamar University; Ms. Marsha Kelman, Assistant Vice President & Director, Institutional Studies, The University of Texas at Austin; Mr. James Langabeer, Vice President Business Affairs, The University of Texas-Pan American; Mr. Bill Nance, Vice President for Finance & Support Services, Texas State University-San Marcos; Mr. Thomas H. Taylor, Assistant Vice President of Finance, Texas A&M University; Dr. Sandra Harper, Chief Academic Officer, Texas A&M University-Corpus Christi; and Mr. Jeff Phelps, Finance Director, Division of Finance, Campus Planning, and Research, Texas Higher Education Coordinating Board.

[2] Physical Plant O&M is now funded through a separate Infrastructure formula.

elements of cost are distributed to the various levels and disciplines on a relatively even basis.

The workgroup agreed that the most appropriate methodology for calculating the weights is an "all funds" approach in which the costs used to calculate the weights must equal those provided in each institution's Annual Financial Report (AFR). An earlier workgroup had taken on a similar task to calculate the weights, but limited its analysis only to faculty costs. That study proved to be methodologically flawed as a result of this limitation.

In addition to faculty costs, the workgroup agreed that five additional elements of operating cost should be included because the Instruction and Operations formula funds these activities as well: Academic Support, Institutional Support, Student Services, Other Instruction (Department Operating Expense), and Research.

Academic Support, Institutional Support, and Student Services are specific entries in each institution's AFR. The sum of Faculty Salaries, Other Instruction (i.e. teaching assistants who actually teach a class) and Departmental Operating Costs is equal to the sum of Instruction and Research. Instruction and Research are functional elements of costs that are specific entries in the AFRs. Together, these five cost centers, plus associated capital outlay from current funds, comprise all of the funding sources dedicated to higher education for I&O, as it is defined in the General Appropriations Act.

The workgroup determined the most appropriate way to allocate these cost centers to the various levels and disciplines. The group agreed on the following allocation methodologies:

- The salaries of faculty who were teaching courses during the years under investigation would be provided to each institution, and each institution would provide a faculty-specific teaching load credit (TLC). The data provided to the institution would already be linked to a level of instruction and academic discipline, and the TLC would allow for the portion of faculty salary dedicated to teaching to be distributed. Because teaching loads vary among the institutions, this value varies among institutions. This calculation also recognized that faculty do not spend all of their time teaching, but often devote part of their time to other activities such as research. Added to faculty salaries are teaching assistant salaries, which each institution also allocates to specific levels and disciplines.
- Academic Support is allocated by level and discipline according to the faculty salary distribution because academic support costs are closely aligned with faculty salary expenditures.
- Institutional Support and Student Services are initially allocated to one of the five levels using the distribution of institution-specific student headcounts, and then to the disciplines according to the distribution of SCHs.
- Department Operating Expense (DOE) was deliberated far more than the other issues. Several DOE calculations were examined to determine the most appropriate allocation methodology. The group finally decided that each institution would charge DOE to the appropriate academic discipline, based on the institution's internal budget designations. For example, the DOE for the English department was charged to "Liberal Arts." After an institution allocated its costs to the appropriate academic discipline, the institution's DOE was then allocated by the level of instruction (undergraduate, master's, etc.) using SCHs, the faculty salary distribution, or some combination of the two, whichever the institution believed best represented the proper distribution of costs to the level of instruction.

Data on the five elements of cost have been collected and allocated for FY 2005 – FY

2007. The current, cost-based Instruction & Operations matrix is given below (Table 1).

Table 1: Current Instruction and Operations Matrix (FY 2008 – FY 2009 Biennium)

	Lower - Division	Upper - Division	Master's	Doctoral	Special Professional
Liberal Arts*	1.00	1.77	4.01	9.94	0.00
Science	1.67	2.93	7.29	20.05	0.00
Fine Arts	1.50	2.51	5.65	9.78	0.00
Teacher Education	1.33	1.79	2.68	7.70	0.00
Agriculture	2.02	2.66	7.13	11.97	0.00
Engineering	2.46	3.51	7.39	17.05	0.00
Home Economics	1.17	1.83	3.21	7.10	0.00
Law	0.00	0.00	0.00	0.00	3.55
Social Service	1.89	2.09	3.76	12.21	0.00
Library Science	1.14	1.21	3.03	7.68	0.00
Vocational Train	1.90	2.37	0.00	0.00	0.00
Physical Training	1.29	1.49	0.00	0.00	0.00
Health Services	1.70	2.44	4.15	9.92	0.00
Pharmacy	1.76	3.85	14.90	25.27	5.13
Business Administration	1.18	1.68	3.70	19.08	0.00
Optometry	0.00	0.00	5.46	19.12	7.00
Teacher Education - Practice	1.31	1.99	0.00	0.00	0.00
Technology	1.85	2.42	5.08	0.00	0.00
Nursing	2.73	3.24	5.36	11.79	0.00
Veterinary Medicine	0.00	0.00	0.00	0.00	14.24

*The lower-division undergraduate Liberal Arts rate is applied to Developmental Education SCH.

Table 2: Cost-Based Instruction and Operations Matrix, FY 2005 – FY 2007 Data

	Lower - Division	Upper - Division	Master's	Doctoral	Special Professional
Liberal Arts	1.00	1.72	4.13	9.30	0.00
Science	1.71	2.96	7.75	20.70	0.00
Fine Arts	1.38	2.32	5.46	7.32	0.00
Teacher Education	1.38	1.73	2.56	7.54	0.00
Agriculture	1.88	2.63	7.16	10.58	0.00
Engineering	2.37	3.75	7.57	16.14	0.00
Home Economics	1.07	1.74	2.93	6.40	0.00
Law	0.00	0.00	0.00	0.00	3.80
Social Service	1.91	2.04	2.99	13.78	0.00
Library Science	1.01	1.12	2.65	6.32	0.00
Vocational Train	1.83	2.06	0.00	0.00	0.00
Physical Training	1.24	1.49	0.00	0.00	0.00
Health Services	1.31	2.06	3.31	7.94	0.00
Pharmacy	2.14	4.50	16.67	28.92	3.72
Business Administration	1.11	1.73	3.48	22.79	0.00
Optometry	0.00	0.00	5.46	19.12	7.00
Teacher Education - Practice	1.11	1.81	0.00	0.00	0.00
Technology	1.86	2.38	4.77	0.00	0.00
Nursing	1.97	2.53	5.00	10.51	0.00
Veterinary Medicine	0.00	0.00	0.00	0.00	17.51

Table 3: Variance, FY 2005 – FY 2007 Cost-Based to Current

	Lower - Division	Upper - Division	Master's	Doctoral	Special Professional
Liberal Arts	0%	-3%	3%	-6%	
Science	2%	1%	6%	3%	
Fine Arts	-8%	-8%	-3%	-25%	
Teacher Education	4%	-3%	-5%	-2%	
Agriculture	-7%	-1%	0%	-12%	
Engineering	-4%	7%	2%	-5%	
Home Economics	-9%	-5%	-9%	-10%	
Law					7%
Social Service	1%	-3%	-21%	13%	
Library Science	-11%	-7%	-13%	-18%	
Vocational Train	-4%	-13%			
Physical Training	-4%	0%			
Health Services	-23%	-15%	-20%	-20%	
Pharmacy	22%	17%	12%	14%	-27%
Business Administration	-6%	3%	-6%	19%	
Optometry			0%	0%	0%
Teacher Education - Practice	-15%	-9%			
Technology	1%	-2%	-6%		
Nursing	-28%	-22%	-7%	-11%	
Veterinary Medicine					23%

Results of the Cost-Based Methodology

Not surprisingly, the cost study indicated that nearly all of the relative weights in the FY 2008 – FY 2009 biennium matrix needed to be adjusted to reflect the costs of each level and discipline. In the cost-based calculation (Table 2), the cost differential between undergraduate and graduate education is significantly less in many academic disciplines than reflected in the current matrix. Total costs and total SCHs for the cost-based matrix are provided in Appendix A. The current matrix was developed as a result of the phase-in approach to the transition between using the old weights and the new cost-based weights. The current biennium employed a phase-in of 75 percent of the change from the original weights and a provision that no institution suffer more than a three percent loss in funding. The cost-based weights using FY 2005 – FY 2007 data do not include a phase-in or three percent mechanism.

Following is a description of the changes between the current matrix and the cost-based matrix.

- The Liberal Arts relative weights declined for upper-division and doctoral-levels. The relative weight for lower-division remained at a value of 1.00 and is the weight against which all others are measured.
- The Science relative weights increased for all levels.
- The Fine Arts relative weights declined for all levels, mostly at the doctoral level.
- The Teacher Education relative weights increased for the lower-division level and declined slightly at the other levels.
- The Agriculture relative weight remained the same at the master's level and declined at the others.
- The Engineering relative weights increased for the master's and upper division levels and declined at the others.
- The Home Economic relative weights declined substantially for all levels.
- The Law relative weight increased seven percent for the special professional

level.

- The Social Services increased at the lower-division and doctoral levels, but declined in the other levels.
- All the Library Science relative weights declined.
- The Vocational Training relative weights decreased on both levels.
- The Physical Training relative weights declined at both lower and upper-division levels.
- The Health Services relative weights declined substantially across the board.
- The Pharmacy relative weights increased on all levels except Special Professional with a 27 percent decrease. The majority of the SCHs are generated at this level.
- The Business Administration relative weights declined on the lower-division and mater's levels, but increased on the upper-division and doctoral levels where most of the SCHs are generated.
- The Optometry relative weights remained unchanged pending further study.
- The Teacher Education Practice relative weights declined fifteen and nine percent respectively for lower and upper-division levels.
- The Technology relative weights increase on all levels.
- The Nursing relative weights declined at all levels. Declines ranged from seven to twenty-eight percent.
- The Veterinary Medicine relative weight declined 23 percent for the Special Professional level.

Because the analysis is budget neutral, an overall decline in the relative weights means that the rate in the formula must be increased. Using FY 2005 through FY 2007 data to calculate the relative weights, the rate increased from $59.02 to $60.21, a two percent increase. Therefore, any reduction in a relative weight of two percent or less will be largely offset by the increase in the rate, so that formula funding for that particular level and discipline will remain about the same. The percentage changes are shown in Table 3 and the method for producing the relative weights is provided in Appendix B.

Applying a higher relative weight for each successively higher level of instruction is intuitively appealing because higher-cost faculty could be expected at higher levels of instruction, and the original FY 2004 – FY 2005 matrix is based on this premise. The cost-based matrix shows a similar relationship. Pharmacy is the only exception.

For Pharmacy, the relative weight at the doctoral level of $28.92 exceeds the weight for the Special Professional level of 3.72. About 30 times as many SCH were taught at the Special Professional level compared to the Doctoral level (140,446 vs. 4,630), while total costs for the Special Professional SCH were only about four times those for the Doctoral SCH ($98,552,980 vs. $25,235,542).

Analysis by Discipline

In addition to developing a methodology to calculate the relative weights from (3-year average) costs that are based on the institutions' Annual Financial Reports, this approach also provides a way to compare the institutions on a discipline and level basis. The Legislature continues to be interested in knowing how much it costs institutions to produce nurses or engineers, for example, and this methodology provides considerable insight. Because the sum of all of an institution's costs and SCHs has been allocated to the various levels and disciplines to calculate the relative weights, it is a fairly simple matter to recast these costs to show how the institutions compare to each other. This can be done on a total, per full-time student equivalent

basis, on a discipline basis on a level basis, or a combination of the three.

Total, Full-Time Student Equivalent Comparison

As expected, the research-oriented institutions tend to be relatively costly institutions on a total, full-time student equivalent (FTSE) basis. However, institutions with fairly small student populations also tend to be relatively costly on a total FTSE basis because of the minimum requirements needed to provide higher education services. A fairly substantial investment must be made prior to serving a single student, and the cost per FTSE declines as the student body population increases.

Table 4 provides a comparison of Total FTSEs, Total Costs, and the Average Cost per FTSE, as summarized below.

Table 4: FY 2007 Average Total Cost Per Full-Time Student Equivalent (FTSE)

Institution	Total FTSE	Total Expense	Expense per FTSE
University of Texas at Arlington	19,695	$ 225,269,221	$ 11,438
University of Texas at Austin	46,015	$ 1,187,579,815	$ 25,808
University of Texas at Dallas	11,805	$ 181,016,601	$ 15,334
University of Texas at El Paso	15,288	$ 164,141,978	$ 10,737
University of Texas at Pan American	15,058	$ 125,451,224	$ 8,331
University of Texas at Brownsville	2,683	$ 41,277,169	$ 15,384
University of Texas of the Permian Basin	2,623	$ 23,135,135	$ 8,821
University of Texas at San Antonio	22,332	$ 210,077,543	$ 9,407
University of Texas at Tyler	4,722	$ 46,259,307	$ 9,797
Texas A&M University*	41,275	$ 693,010,635	$ 16,790
Texas A&M University at Galveston	1,489	$ 21,803,155	$ 14,645
Prairie View A&M University	7,153	$ 86,281,374	$ 12,062
Tarleton State University	8,020	$ 65,353,274	$ 8,149
Texas A&M University - Commerce	7,107	$ 56,468,131	$ 7,945
Texas A&M University - Corpus Christi	7,536	$ 78,689,348	$ 10,442
Texas A&M University - Kingsville	5,568	$ 65,750,050	$ 11,808
Texas A&M International University	3,863	$ 42,331,020	$ 10,958
Texas A&M University - Texarkana	1,117	$ 14,227,018	$ 12,733
West Texas A&M University	6,098	$ 49,677,842	$ 8,147
University of Houston	28,907	$ 412,890,037	$ 14,283
University of Houston - Clear Lake	5,442	$ 58,249,719	$ 10,704
University of Houston - Downtown	8,217	$ 60,269,134	$ 7,335
University of Houston - Victoria	1,835	$ 23,307,077	$ 12,699
Midwestern State University	4,945	$ 40,016,232	$ 8,092
University of North Texas	27,949	$ 252,117,178	$ 9,021
Stephen F. Austin State University	10,605	$ 80,492,320	$ 7,590
Texas Southern University	9,395	$ 105,060,813	$ 11,183
Texas Tech University	26,320	$ 336,866,133	$ 12,799
Texas Woman's University	9,716	$ 92,732,206	$ 9,544
Angelo State University	5,366	$ 49,727,643	$ 9,266
Lamar University	8,311	$ 87,334,491	$ 10,508
Sam Houston State University	14,563	$ 108,206,260	$ 7,430
Texas State University - San Marcos	23,992	$ 199,081,509	$ 8,298
Sul Ross State University	2,259	$ 27,489,998	$ 12,168
Totals	**417,272**	**$ 5,311,640,590**	
Average Statewide Cost			**$ 12,729**

*Excludes Research Foundation or Service Agencies, but Texas A&M University includes 509 headcount as FTSE and $43,027,774 for Texas A&M University College of Veterinary Medicine. It does not include the Research Foundation or Service Agencies.
**Includes both Sul Ross State University and Sul Ross-Rio Grande College.

Discipline Analysis, Average Cost per Semester Credit Hour Basis, by Institution

Both the Coordinating Board and the Legislature continue to be interested in how universities compare in costs per academic discipline. Table 5 on the following page provides this comparison. The numbers in the table show the results of dividing total costs by total SCHs, on a per discipline basis. Semester credit hours for all levels are included. The result is an average cost per SCH per discipline.

This comparison allows policy makers to see how the institutions spend all their revenues, which include formula funds. While the Instruction and Operations formula provides funds on a level and discipline basis, the formula was never intended to be a budgeting mechanism. Institutions have long had the latitude to spend these formula funds in a manner that satisfies their individual missions. Funds received because of engineering or nursing enrollment may be shifted to teacher education if a university desires. Unfortunately, this exacerbates attempts to address workforce shortage issues through the Instruction and Operations formula because there is no guarantee the institutions will spend funding in the way the Legislature prefers.

It is important to keep in mind when looking at the results in this table that a high average cost per SCH (Table 5) does not necessarily imply that a university has a particularly expensive program. A university may have very few students in a particular discipline, which would spread costs among very few SCH, resulting in a high average cost per SCH. This is the case in the agriculture discipline at the University of Houston, Clear Lake. They have $105,830 in expenses and generate 24 SCHs resulting in a figure of $4,410 per SCH.

Additionally, the fundamental assumption of this study is that all universities are providing an adequate education to their students, and the cost of that education is roughly the same across all institutions for any given discipline. Variations in the average cost per SCH may be affected not only by the number of students in a particular discipline but also by the extent to which the quality and quantity of enrichments of the general academic environment (that exceed adequacy) vary among the different institutions.

Table 5: FY 2007 Average Total Cost per Semester Credit Hour per Discipline

Institution	Liberal Arts	Science	Fine Arts	Teacher Education	Agriculture	Engineering	Home Economics	Law	Social Services	Library Science	Vocational Training	Physical Training	Health Services	Pharmacy	Business Administration	Optometry	Teacher Education Practice	Technical	Nursing
University of Texas at Arlington	252	437	306	265	898	1051	119	0	378	0	194	549	249	0	283	0	1266	790	446
University of Texas at Austin	463	1522	612	1611	0	1853	427	1126	1070	690	0	0	825	1317	789	0	1114	334	1073
University of Texas at Dallas	400	486	257	210	0	919	0	0	0	0	0	131	988	0	666	0	315	0	0
University of Texas at El Paso	269	409	277	301	0	991	0	0	312	235	342	146	1224	0	324	0	171	444	397
University of Texas at Pan American	228	266	262	407	0	519	321	0	492	221	0	203	363	0	361	0	309	455	562
University of Texas at Brownsville	457	648	753	519	0	1552	696	0	1641	0	0	1612	597	0	466	0	478	1271	703
University of Texas of the Permian Basin	244	299	358	365	0	893	252	0	419	751	1075	371	359	0	345	0	819	692	0
University of Texas at San Antonio	225	339	401	409	1223	621	426	0	981	0	0	165	342	0	404	0	313	361	0
University of Texas at Tyler	224	416	323	417	0	804	189	0	159	0	0	0	519	0	265	0	299	584	454
Texas A&M University	372	811	204	829	494	889	189	0	0	0	0	223	272	0	425	0	190	378	0
Texas A&M University at Galveston	301	664	0	0	1427	905	0	0	0	0	519	439	290	0	368	0	0	678	0
Prairie View A&M University	311	362	310	421	756	796	332	0	392	1061	613	314	353	0	557	0	736	679	727
Tarleton State University	203	302	295	330	564	366	190	0	242	0	270	181	450	435	230	0	362	311	444
Texas A&M University - Commerce	252	254	414	297	300	371	265	0	323	225	244	276	187	0	296	0	270	329	0
Texas A&M University - Corpus Christi	279	349	454	478	1876	574	220	0	320	0	581	280	419	0	388	0	335	522	565
Texas A&M University - Kingsville	285	393	401	405	998	535	1607	0	390	0	1070	323	494	0	380	0	461	400	0
Texas A&M International University	331	387	457	411	0	613	279	0	511	0	0	270	366	0	427	0	330	0	547
Texas A&M University - Texarkana	385	782	235	501	0	1384	429	0	0	0	0	0	546	0	389	0	444	0	892
West Texas A&M University	184	240	431	283	507	438	340	0	173	0	0	308	494	0	266	0	321	397	587
University of Houston	339	623	451	560	0	1231	266	573	613	0	381	338	367	964	384	1327	783	528	0
University of Houston - Clear Lake	339	403	420	316	4410	734	350	0	384	395	0	0	427	944	426	0	186	954	0
University of Houston - Downtown	198	386	179	283	0	407	203	0	2159	0	0	0	0	0	238	0	327	769	0
University of Houston - Victoria	402	436	548	455	0	603	0	0	0	0	0	0	0	0	509	0	377	680	705
Midwestern State University	208	227	391	402	0	521	471	0	302	0	215	300	355	0	281	0	579	1137	310
University of North Texas	252	348	415	393	0	672	186	0	199	341	204	309	301	0	333	0	355	660	0
Stephen F. Austin State University	183	247	303	343	693	577	169	0	447	0	200	169	252	0	280	0	369	522	553
Texas Southern University	279	386	335	673	0	767	304	538	417	0	155	181	237	472	380	0	235	375	0
Texas Tech University	312	498	401	502	926	714	411	639	479	788	0	221	464	0	468	0	419	430	0
Texas Woman's University	233	297	401	399	326	380	336	0	305	403	0	609	446	0	251	0	340	480	567
Angelo State University	305	310	367	275	235	450	271	0	0	0	0	352	305	0	304	0	235	288	493
Lamar University	260	367	365	542	0	710	349	0	371	76	1255	295	395	0	388	0	308	637	502
Sam Houston State University	236	224	303	316	255	494	227	0	0	363	183	160	227	0	269	0	290	240	0
Texas State University - San Marcos	228	327	362	341	404	410	271	0	394	0	21837	252	426	0	266	0	446	333	0
Sul Ross State University	318	534	357	434	624	982	0	0	0	0	381	315	971	0	596	0	502	1437	671
Averages	294	577	385	480	577	1012	317	776	527	472	318	251	435	948	402	1726	364	454	571
High	463	1522	753	1611	4410	1853	1607	1126	2159	1061	21837	1612	1224	1317	789	1327	1266	1437	1073
Low	183	224	0	0	0	366	0	0	0	0	0	0	0	0	230	0	0	0	0
Median	274	386	364	404	245	691	268	0	347	0	169	261	366	0	374	0	338	468	421

Conclusion

Weights from the original cost study, which incorporated three years of data with a three percent hold harmless provision, were adopted by the 79th Legislature in FY 2005 and used in formula appropriations for the FY 2006 – FY 2007 biennium. Study data was taken from FY 2002 – FY 2004.

The Coordinating Board recommends basing the relative weight matrix on costs and tying those costs to Annual Financial Reports. Special item funding or another type of incentive funding, such as a separate payment for each nursing degree awarded, should be used to provide funding for state needs, such as workforce shortage areas. By taking this approach, the Legislature may then require non-formula funding be spent on the discipline for which it was intended.

Weights in this update (based on data for FY 2005 – FY 2007) show a continued compression in the matrix. The weights for individual disciplines have been decreasing since the adoption of the original cost study. And, the weights are compressing across levels as well. This

means the dollar rate per SCH will increase to compensate in a budget-neutral environment.

These rates will not be used for the next legislative session. Rather they provide an interim look at the direction the weights are headed. The relative weights are included in this publication as Appendix B. Appendix C shows the budget-neutral analysis (not actual appropriations) using those weights. And, Appendix H shows the hold harmless amounts actually appropriated for universities by the Legislature for FY 2008 – FY 2009.

Appendix A

FY 2005 – FY 2007 Sum of All Costs at Public Universities*

	Lower - Division	Upper -Division	Master's	Doctoral	Special Professional	Totals
Liberal Arts	1,861,095,877	1,205,289,061	565,057,789	401,184,705	262,072	$4,032,889,504
Science	1,087,853,119	864,274,208	375,166,421	620,038,564	456,024	$2,947,788,336
Fine Arts	356,071,293	276,058,664	102,760,293	48,176,392	0	$783,066,641
Teacher Education	65,072,881	328,130,341	436,459,426	211,037,187	1,853	$1,040,701,688
Agriculture	61,772,549	107,083,906	61,090,002	36,610,161	0	$266,556,618
Engineering	335,055,955	675,865,158	667,943,394	588,230,667	0	$2,267,095,174
Home Economics	63,544,185	82,570,901	24,909,959	15,537,449	0	$186,562,494
Law	0	0	0	0	236,872,071	$236,872,072
Social Service	13,093,923	38,176,265	61,447,071	16,488,850	0	$129,206,109
Library Science	1,696,127	3,019,490	38,192,032	5,053,761	0	$47,961,411
Vocational Train	4,583,783	3,046,570	9,733	0	0	$7,640,085
Physical Training	60,072,822	3,280,474	45,235	0	8	$63,398,539
Health Services	65,448,753	131,481,100	132,029,314	23,507,483	0	$352,466,649
Pharmacy	979,310	5,597,965	18,692,517	25,235,542	98,552,980	$149,058,314
Business Administration	213,756,350	916,898,373	485,996,999	154,763,919	2,967,705	$1,774,383,346
Optometry	1,382,234	4,142,807	11,032,503	16,416,784	39,177,508	$72,151,837
Teacher Education - Practice	2,202,574	117,540,761	273,100	25	0	$120,016,460
Technology	49,705,743	91,693,909	18,388,684	0	0	$159,788,336
Nursing	27,241,971	167,220,019	69,995,381	14,889,689	0	$279,347,060
Veterinary Medicine						
Totals	$4,270,629,448	$5,021,369,971	$3,069,489,854	$2,177,171,178	$378,290,222	$14,916,950,674

FY 2005 – FY 2007 Sum of All Semester Credit Hours at Public Universities*

	Lower - Division	Upper -Division	Master's	Doctoral	Special Professional	Totals
Liberal Arts	9,875,152	3,725,212	725,476	228,944	0	$14,554,784
Science	3,382,601	1,547,669	256,933	158,945	0	$5,346,148
Fine Arts	1,369,186	631,833	99,799	34,934	0	$2,135,752
Teacher Education	250,496	1,006,285	905,997	148,436	0	$2,311,214
Agriculture	174,762	216,415	45,246	18,365	0	$454,788
Engineering	750,881	955,396	468,456	193,432	0	$2,368,165
Home Economics	316,418	252,420	45,055	12,876	0	$626,769
Law	0	0	0	0	330,337	$330,337
Social Service	36,412	99,448	109,172	6,347	0	$251,379
Library Science	8,892	14,303	76,458	4,244	0	$103,897
Vocational Train	13,303	7,849	0	0	0	$21,152
Physical Training	256,081	11,686	0	0	0	$267,767
Health Services	265,250	338,336	211,732	15,707	0	$831,025
Pharmacy	2,425	6,594	5,951	4,630	140,446	$160,046
Business Administration	1,022,956	2,816,161	741,489	36,037	0	$4,616,643
Optometry	0	1	768	1,047	46,044	$47,860
Teacher Education - Practice	10,551	344,530	114	0	0	$355,195
Technology	141,725	204,160	20,465	0	0	$366,350
Nursing	73,266	351,047	74,280	7,520	0	$506,113
Veterinary Medicine						
Totals	$17,950,357	$12,529,345	$3,787,391	$871,464	$516,827	$35,655,384

*These figures exclude the costs and SCH for Texas A&M University College of Veterinary Medicine. Those weights are calculated separately.

Appendix B

FY 2005 – FY 2007 Calculated Weights and Calculated Relative Weights

To calculate the weights, divide the total costs by the total SCH, per level and discipline. This is shown below. The relative weight of Veterinary Medicine was calculated separately because all data collected on this discipline are based on headcounts and not SCH.

	Calculated Weights				
	Lower - Division	Upper - Division	Master's	Doctoral	Special Professional
Liberal Arts	188	324	779	1,752	0
Science	322	558	1,460	3,901	0
Fine Arts	260	437	1,030	1,379	0
Teacher Education	260	326	482	1,422	0
Agriculture	353	495	1,350	1,993	0
Engineering	446	707	1,426	3,041	0
Home Economics	201	327	553	1,207	0
Law	0	0	0	0	717
Social Service	360	384	563	2,598	0
Library Science	191	211	500	1,191	0
Vocational Train	345	388	0	0	0
Physical Training	235	281	0	0	0
Health Services	247	389	624	1,497	0
Pharmacy	404	849	3,141	5,450	702
Business Administration	209	326	655	4,295	0
Optometry*	0	4,142,807	14,365	15,680	851
Teacher Education - Practice	209	341	2,396	0	0
Technology	351	449	899	0	0
Nursing	372	476	942	1,980	0

To create relative weights, divide each weight by the value of lower-division undergraduate liberal arts, so that the weights are portrayed in a “relative” fashion.

	Calculated Relative Weights				
	Lower - Division	Upper - Division	Master's	Doctoral	Special Professional
Liberal Arts	1.00	1.77	4.01	9.94	0.00
Science	1.67	2.93	7.29	20.05	0.00
Fine Arts	1.50	2.51	5.65	9.78	0.00
Teacher Education	1.33	1.79	2.68	7.70	0.00
Agriculture	2.02	2.66	7.13	11.97	0.00
Engineering	2.46	3.51	7.39	17.05	0.00
Home Economics	1.17	1.83	3.21	7.10	0.00
Law	0.00	0.00	0.00	0.00	3.55
Social Service	1.89	2.09	3.76	12.21	0.00
Library Science	1.14	1.21	3.03	7.68	0.00
Vocational Train	1.90	2.37	0.00	0.00	0.00
Physical Training	1.29	1.49	0.00	0.00	0.00
Health Services	1.70	2.44	4.15	9.92	0.00
Pharmacy	1.76	3.85	14.90	25.27	5.13
Business Administration	1.18	1.68	3.70	19.08	0.00
Optometry*	0.00	0.00	5.46	19.12	7.00
Teacher Education - Practice	1.31	1.99	0.00	0.00	0.00
Technology	1.85	2.42	5.08	0.00	0.00
Nursing	2.73	3.24	5.36	11.79	0.00
Veterinary Medicine	0.00	0.00	0.00	0.00	14.24

* Note: Optometry Matrix Values for FY 2010 - 2011 are not updated through the Cost Study to avoid a data bias error. The original FY 2004 - 2005 values are used.

Appendix C

FY 2005 – FY 2007 No Phase-In Distribution of Formula Funding

Institution	FY 2008 - 2009 Annual Instruction and Operations Matrix Rate at $59.02	Annual $60.21 Budget Neutral Rate	Annual Difference	Average Annual Percent Change	System Impact
University of Texas at Arlington	82,339,368	82,392,429	53,061	0.1%	1,066,651
University of Texas at Austin	220,443,429	220,855,494	412,065	0.2%	
University of Texas at Dallas	59,796,011	60,127,768	331,757	0.6%	
University of Texas at El Paso	53,653,115	53,698,041	44,926	0.1%	
University of Texas at Pan American	46,111,703	45,934,652	(177,050)	(0.4%)	
University of Texas at Brownsville	9,552,258	9,536,025	(16,233)	(0.2%)	
University of Texas of the Permian Basin	8,408,345	8,483,106	74,761	0.9%	
University of Texas at San Antonio	74,063,827	74,918,400	854,573	1.2%	
University of Texas at Tyler	16,533,253	16,022,045	(511,208)	(3.1%)	
Texas A&M University*	192,922,378	195,419,594	2,497,216	1.3%	1,855,053
Texas A&M University at Galveston	4,593,222	4,700,678	107,456	2.3%	
Prairie View A&M University	25,558,854	25,392,521	(166,333)	(0.7%)	
Tarleton State University	26,545,720	26,552,493	6,774	0.0%	
Texas A&M University - Commerce	27,776,649	27,602,736	(173,913)	(0.6%)	
Texas A&M University - Corpus Christi	25,729,651	25,514,516	(215,134)	(0.8%)	
Texas A&M University - Kingsville	22,345,188	22,546,458	201,271	0.9%	
Texas A&M International University	12,441,354	12,407,065	(34,289)	(0.3%)	
Texas A&M University - Texarkana	4,283,986	4,268,718	(15,267)	(0.4%)	
West Texas A&M University	20,601,103	20,248,377	(352,726)	(1.7%)	
University of Houston	118,909,221	119,433,362	524,141	0.4%	987,741
University of Houston - Clear Lake	24,765,397	24,928,768	163,371	0.7%	
University of Houston - Downtown	22,625,732	22,996,639	370,908	1.6%	
University of Houston - Victoria	7,818,495	7,747,817	(70,679)	(0.9%)	
Midwestern State University	15,228,374	14,742,033	(486,341)	(3.2%)	(486,341)
University of North Texas	97,635,832	96,978,897	(656,935)	(0.7%)	(656,935)
Stephen F. Austin State University	32,018,174	31,669,670	(348,504)	(1.1%)	(348,504)
Texas Southern University	31,360,408	30,965,870	(394,538)	(1.3%)	(394,538)
Texas Tech University	104,789,216	106,242,337	1,453,121	1.4%	(1,416,628)
Angelo State University	43,199,181	40,329,432	(2,869,749)	(6.6%)	
Texas Woman's University	15,602,532	15,439,706	(162,826)	(1.0%)	(162,826)
Lamar University	27,397,940	27,172,736	(225,204)	(0.8%)	(443,673)
Sam Houston State University	43,756,188	43,869,929	113,741	0.3%	
Texas State University - San Marcos	74,389,097	74,065,977	(323,119)	(0.4%)	
Sul Ross State University	7,387,285	7,378,194	(9,091)	(0.1%)	
Totals	**1,600,582,485**	**1,600,582,484**	**(1)**	**(0.0%)**	
Sum of All Reductions					(7,209,143)
Biennial Cost of Hold Harmless					(14,418,286)

Notes:

Semester credit hours and all funds (excluding auxiliary) are averaged for FY 2005, FY 2006, and FY 2007 to calculate the relative weights. The formula funding estimates above are calculated by multiplying the relative weights by the FY 2007 SCHs, which is the latest data currently available.

* These figures exclude Texas A&M University College of Veterinary Medicine, Research Foundation, or Service Agencies.

Appendix D

Formula Hold Harmless Amounts

Appropriated by the 80th Legislature for Universities

Institution	Biennium
University of Texas at Arlington	$12,474,202
University of Texas at Tyler	264,524
Prairie View A&M Univeristy	3,089,868
Texas A&M Texarkana	88,020
Lamar University	554,432
Midwestern State University	785,600
Texas Southern University	3,162,844
Texas Woman's University	10,538,126
Angelo State University	741,712
Sul Ross State University	1,566,251
Total	**$33,265,579**

Provided regarding appropriations based on base period SCH collected for summer 2006, fall 2006, and spring 2007.

This document is available on the Texas Higher Education Coordinating Board Website:
http://www.thecb.state.tx.us

For more information, contact:

Texas Higher Education Coordinating Board
P.O. Box 12788
Austin, TX 78711
512/427-6130

Paul Turcotte
Program Director
Planning and Accountability, Finance and Resource Planning

Gary Johnstone
Deputy Assistant Commissioner
Planning and Accountability, Finance and Resource Planning