

MEMORANDUM

To: Board of Regents
From: Board Office
Subject: Unit Cost Study for FY 2001
Date: June 10, 2002

Recommended Action:

Receive the unit cost study for FY 2001.

Executive Summary:

On a biennial basis, the Regent universities compile and report the unit costs of instruction to the Board.

Unit cost represents the general fund supported cost of instructing a full-time equivalent (FTE) student. The information is compiled to:

- Analyze unit cost changes over time;
- Assist in the Board's tuition rate discussion; and
- Use as a basis to determine the funding goal for the Iowa Tuition Grant Program.

Calculations are made with certain assumptions relative to instructional costs at the various student levels. Both total and variable costs of instruction are calculated using standardized computation methods.

The Regent composite unit cost increased 7.3% over the two years, for an average of about 3.7% each year. The highest composite unit cost is reported at SUI due to the more costly advanced graduate and professional level programs. The lowest composite unit cost is reported at UNI, that does not have any professional programs.

**Unit Cost of Instruction
FY 2001**

Student Level	SUI	ISU	UNI	Regent Composite
Lower Division	\$7,430	\$6,926	\$6,060	\$6,931
Upper Division	11,288	9,621	9,622	10,170
Overall Undergraduate	9,432	8,402	8,132	8,698
Master's	15,792	11,549	13,664	14,000
Advanced Graduate	33,005	15,444	18,954	22,348
Professional	30,382	50,714	N/A	32,921
Composite	\$14,210	\$9,957	\$8,817	\$11,395

	SUI	ISU	UNI	Regent Composite
Fixed Unit Cost	\$2,569	\$2,668	\$1,564	\$2,569
Variable Unit Cost	<u>\$11,641</u>	<u>\$7,289</u>	<u>\$7,253</u>	<u>\$8,826</u>
Total Unit Cost	\$14,210	\$9,957	\$8,817	\$11,395

Strategic Plan:

Review of the unit cost study is consistent with the Board's strategic plan to provide effective stewardship of institutional resources (Key Result Area 4.0.0.0) while advocating for resources needed to provide access to educational, research, and service opportunities (Key Result Area 2.0.0.0).

Background:

History Regent universities have prepared general fund unit cost calculations in alternate years since FY 1969.

The formula for computation of the basic unit cost has remained essentially unchanged since inception.

Instructional Costs In its simplest terms, an average cost of instruction could be determined by dividing total costs by the total number of students. The unit cost of instruction determines which institutional costs are related to instruction and classifies these costs according to student level.

Not all institutional costs are classified as instructional. Included in the computation are the costs of:

- Instruction;
- Research (funded by general education funds);
- Academic Support (excludes Price Lab School);
- Student Services;
- Institutional Support; and
- Plant Operation and Maintenance (excludes building repairs).

Student Level The cost of instruction varies significantly according to student level. The unit costs of instruction are calculated making certain assumptions relative to instructional costs at the various student levels and is determined for each of five student educational levels:

- Lower division (freshman, sophomore);
- Upper division (junior, senior);
- Master's;
- Advanced Graduate (i.e. Ph.D.); and
- Professional (i.e. MD, DVM, DDS, JD).

Educational Programs The cost of instruction varies significantly according to educational programs. Higher cost undergraduate programs such as engineering, the physical and biological sciences, and pharmacy are prevalent at the Regent universities. The various educational opportunities make for dramatically diverse cost structures at each of the universities. For example:

- The University of Iowa offers undergraduate degrees in microbiology and biochemistry and has a large number of students enrolled in pre-medicine and pre-dentistry programs;
 - Iowa State University offers degrees in agriculture and molecular biology and has a large number of students enrolled in pre-medicine and pre-veterinary medicine programs; and
 - The University of Northern Iowa offers degrees in accounting and teaching and has a large number of students enrolled in chemistry and music education.
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Analysis:

Calculations The unit cost study is prepared by first determining which programs and expenditures are related to instruction and then classifies costs according to student level.

Calculations are based on general education funds and include:

- State appropriations;
- Tuition income (other than designated tuition);
- Sales and services income (other than auxiliary enterprise generated);
- Indirect cost recoveries; and
- Restricted funds (federal student aid, federal and nonfederal gifts and grants, and auxiliary enterprises income.)

Programs Included / Excluded

Unit Cost calculations include programs that are considered to be a cost of instruction and exclude programs that are not considered to be a cost of instruction.

Unit Cost Computation				
	SUI	ISU	UNI	Composite
Programs Included	\$378,595,192	\$270,346,672	\$106,873,493	\$755,815,357
Less Indirect Cost Recovery	<u>(\$31,240,727)</u>	<u>(\$14,855,434)</u>	<u>(\$1,536,354)</u>	<u>(\$47,632,515)</u>
Total Programs Included	\$347,354,465	\$255,491,238	\$105,337,139	\$708,182,842
Total Programs Excluded	<u>\$62,190,389</u>	<u>\$54,966,776</u>	<u>\$18,089,600</u>	<u>\$135,246,765</u>
Total Operating Expenditures	\$409,544,854	\$310,458,014	\$123,426,739	\$843,429,607

Programs totaling over \$708.2 million are included in the unit cost computation and consist of:

- Instruction;
- Research;
- Academic Support (excludes Price Lab School);
- Student Services;
- Institutional Support; and
- Plant Operations / Maintenance (excludes building repairs).

Programs totaling over \$135.2 are excluded from the unit cost computation and consist of:

- Building repairs;
- Public service;
- Scholarships and fellowships;
- Auxiliary enterprises;
- Health care units;
- Academic support (includes the Price Lab School); and
- Reimbursed and unreimbursed indirect costs.

Student
Level
Classification

The cost of instruction varies significantly according to student level and educational programs offered at each institution. The Regent universities have substantial responsibilities and costs associated with the more costly graduate and professional programs. Providing various educational opportunities makes for a dramatically diverse cost structure.

Expenditures by Student Level Classification				
	SUI	ISU	UNI	Composite
Lower Division	\$59,177,331	\$64,186,725	\$27,307,567	\$150,671,623
Upper Division	96,985,308	107,987,867	60,292,384	265,265,559
Master's	45,639,469	23,040,760	11,709,718	80,389,947
Advance Graduate	52,478,592	35,489,703	6,027,470	93,995,765
Professional				
Dentistry	18,503,490	--	--	18,503,490
Law	15,858,793	--	--	15,858,793
Medicine	41,899,561	--	--	41,899,561
Pharmacy	7,622,489	--	--	7,622,489
Veterinary	<u>0</u>	<u>19,981,195</u>	--	<u>19,981,195</u>
Subtotal	<u>83,884,333</u>	<u>19,981,195</u>	--	<u>103,865,528</u>
Total Expenditures Included	\$338,165,033	\$250,686,250	\$105,337,139	\$694,188,422
Total Expenditures Excluded	<u>\$71,379,821</u>	<u>\$59,771,764</u>	<u>\$18,089,600</u>	<u>\$149,241,185</u>
Total Operating Expenditures	\$409,544,854	\$310,458,014	\$123,426,739	\$843,429,607

Expenditures of almost \$150.0 million are excluded from the unit cost computation because they are not considered to be a cost of instruction and consist of:

- Building repairs;
- Public service
- Scholarships and fellowships
- Auxiliary enterprises
- Health care units
- Academic support (includes the Price Lab School);
- Reimbursed indirect costs;
- Unreimbursed indirect costs (from ag. Exp. St. & Coop Ext.); and
- IPRT (and Operation / Maintenance)

Unit Cost
Summary

Unit Cost of Instruction FY 2001								
Student Level	SUI		ISU		UNI		Regent Composite	
	FY 2001	2-year Incr.	FY 2001	2-year Incr.	FY 2001	2-year Incr.	FY 2001	2-year Incr.
Lower Division	\$7,430	15.5%	\$6,926	4.0%	\$6,060	12.6%	\$6,931	9.7%
Upper Division	11,288	12.1%	9,621	0.7%	9,622	3.3%	10,170	5.2%
Overall Undergraduate	9,432	13.6%	8,402	1.9%	8,132	5.0%	8,698	6.7%
Master's	15,792	(13.5%)	11,549	4.2%	13,664	18.0%	14,000	(4.4%)
Advanced Graduate	33,005	29.3%	15,444	9.7%	18,954	12.0%	22,348	14.6%
Professional	30,382	39.5%	50,714	5.3%	N/A	N/A	32,921	33.7%
Composite	\$14,210	12.6%	9,957	2.9%	8,817	6.3%	\$11,395	7.3%

Total instructional expenditures increased an average of 9.6% over the two years without much variance among universities (page 7). At the same time, total enrollment increased an average of 2.1% over the same period but the change varied significantly by university. Iowa State University had the largest increase in enrollment of 6.7%. This combination of these two increase accounts for the smaller unit cost increase over the two-year period at ISU.

The University of Iowa increased spending for the Masters programs by only 5.2%. During this same time, enrollment increased by 21.7%. This combination resulted in a negative percent change over the two-year period.

Fixed /
Variable
Costs

Fixed costs include research, library books, plant operations, and equipment. These costs are expected to remain stable within a reasonable enrollment range.

Variable costs of instruction are those costs which change in proportion to the number of students. These costs include direct instructional costs, general administration, and student services and are computed by subtracting specified fixed costs from total costs.

FY 2001					
	SUI	ISU	UNI	Regent Composite	%
Fixed Costs	\$61,146,707	\$67,184,397	\$18,686,710	\$147,017,814	21.2%
Variable Costs	<u>\$277,018,326</u>	<u>\$183,501,853</u>	<u>\$86,650,429</u>	<u>\$547,170,608</u>	<u>78.8%</u>
Total Costs	\$338,165,033	\$250,686,250	\$105,337,139	\$694,188,422	100.0%
Variable Cost Factor*	81.9%	73.2%	82.3%	78.8%	

*Variable costs divided by total costs.

Fixed /
Variable
Costs Per
FTE
Student

FTE enrollments are based on 31 credit hours per student per fiscal year for undergraduates and 18 credit hours per student per fiscal year for advanced graduate students; each professional student is counted as one FTE.

FY 2001				
	SUI	ISU	UNI	Regent Composite
Fixed Cost	\$61,146,707	\$67,184,397	\$18,686,710	\$147,017,814
Composite Unit Fixed Cost	\$2,569	\$2,668	\$1,564	\$2,413

Variable Cost	277,018,326	183,501,853	86,650,429	547,170,608
Lower Division	\$6,086	\$5,070	\$4,985	5,463
Upper Division	9,247	7,043	7,915	8,017
Undergrad Composite	7,726	6,151	6,690	6,856
Master's	12,937	8,454	11,240	11,035
Advanced Graduate	27,037	11,305	15,592	17,615
Professional	24,888	--	--	
Dentistry	48,427	--	--	
Law	19,161	--	--	
Medicine	25,481	--	--	
Pharmacy	14,762	--	--	
Veterinary	--	37,122	--	
Composite Unit Variable Cost	\$11,641	\$7,289	\$7,253	\$8,981

Total Cost	\$338,165,033	\$250,686,250	\$105,337,139	\$694,188,422
Total Composite Unit Cost	\$14,210	\$9,957	\$8,817	\$11,395

SUI Professional Unit Cost of Instruction	
Medicine	31,106
Dentistry	59,117
Pharmacy	18,020
Law	23,391
Professional Composite	30,382


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Approved: 
Gregory S. Nichols

**EXPENDITURES INCLUDED, FTE STUDENTS, AND UNIT COST OF INSTRUCTION
FY 1999 AND FY 2001**

	Expenditures Included		FTE Students ¹		Unit Cost	
	FY 1999	FY 2001	FY 1999	FY 2001	FY 1999	FY 2001
			%		%	
			Change		Change	
						Change
UNIVERSITY OF IOWA						
Lower Division	\$52,068,532	\$59,177,331	13.7%	7,965	\$6,435	\$7,430
Upper Division	86,030,969	96,985,308	12.7%	8,592	10,068	11,288
Subtotal Undergraduate	\$138,099,501	\$156,162,639	13.1%	16,557	\$8,301	\$9,432
Master's	43,370,949	45,639,469	5.2%	2,890	18,261	15,792
Adv. Graduate	56,882,207	52,478,592	-7.7%	1,590	25,519	33,005
Professional	70,792,510	83,884,333	18.5%	2,761	21,782	30,382
Total	\$309,145,167	\$338,165,033	9.4%	23,798	\$12,623	\$14,210
IOWA STATE UNIVERSITY						
Lower Division	\$57,998,142	\$64,186,725	10.7%	9,267	\$6,663	\$6,926
Upper Division	100,434,675	107,987,867	7.5%	11,224	9,550	9,621
Subtotal Undergraduate	\$158,432,817	\$172,174,592	8.7%	20,491	\$8,242	\$8,402
Master's	18,613,433	23,040,760	23.8%	1,995	11,086	11,549
Advanced Graduate	32,414,278	35,489,703	9.5%	2,298	14,075	15,444
Professional	18,882,308	19,981,195	5.8%	394	48,169	50,714
Total	\$228,342,836	\$250,686,250	9.8%	25,178	\$9,677	\$9,957
UNIVERSITY OF NORTHERN IOWA						
Lower Division	\$22,365,387	\$27,307,567	22.1%	4,506	\$5,381	\$6,060
Upper Division	58,193,329	60,292,384	3.6%	6,266	9,312	9,622
Subtotal Undergraduate	\$80,558,716	\$87,599,951	8.7%	10,772	\$7,742	\$8,132
Master's	9,750,565	11,709,718	20.1%	842	11,580	13,664
Advanced Graduate	5,787,307	6,027,470	4.1%	342	16,922	18,954
Total	\$96,096,588	\$105,337,139	9.6%	11,947	\$8,292	\$8,817
TOTAL REGENT UNIVERSITIES						
Lower Division	\$132,432,061	\$150,671,623	13.8%	21,738	\$6,321	\$6,931
Upper Division	244,658,973	265,265,559	8.4%	26,082	9,666	10,170
Subtotal Undergraduate	\$377,091,034	\$415,937,182	10.3%	47,820	\$8,151	\$8,698
Master's	71,734,947	80,389,947	12.1%	5,742	14,652	14,000
Advanced Graduate	95,083,792	93,995,765	-1.1%	4,206	19,508	22,348
Professional	89,674,818	103,865,528	15.8%	3,155	24,622	32,921
TOTAL	\$633,584,591	\$694,188,422	9.6%	60,923	\$10,617	\$11,395

(1) Based on 31 credit hours per student per fiscal year for undergraduates and 18 credit hours per student per fiscal year for Advanced Graduate students; each Professional student is counted as one FTE.