

Florida Association of Institutional Research
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The Scenario Faced By Most

Program	Revenue	Expense	Contribution
Mechanical Engineering	\$6,500,000	\$6,000,000	\$500,000
Civil Engineering	\$4,000,000	\$4,500,000	(\$500,000)
Software Engineering	\$5,500,000	\$4,000,000	\$1,500,000
Clinical Psychology	\$3,500,000	\$4,000,000	(\$500,000)
Human Factors Psychology	\$4,500,000	\$3,500,000	\$1,000,000
Political Science	\$7,000,000	\$5,000,000	\$2,000,000
English Literature	\$2,000,000	\$4,000,000	(\$2,000,000)
Campus Total	\$33,000,000	\$31,000,000	\$2,000,000

Target Negative Programs

Program	Revenue	Expense	Contribution
Mechanical Engineering	\$6,500,000	\$6,000,000	\$500,000
Civil Engineering	\$4,000,000	\$4,500,000	(\$500,000)
Software Engineering	\$5,500,000	\$4,000,000	\$1,500,000
Clinical Psychology	\$3,500,000	\$4,000,000	(\$500,000)
Human Factors Psychology	\$4,500,000	\$3,500,000	\$1,000,000
Political Science	\$7,000,000	\$5,000,000	\$2,000,000
English Literature	\$2,000,000	\$4,000,000	(\$2,000,000)
<u>Campus Total</u>	\$33,000,000	\$31,000,000	\$2,000,000

Results Of That Approach ...

Program	But there are still	negative inse	Contribution		
Mechanical Engineering	margins in the s degree progran		\$900,000		
Civil Engineering	\$4,000,000	\$4,050,000	(\$50,000)		
Software Engineering	\$5,500,000	\$3,600,00	\$1,900,000		
Clinical Psychology	\$3,500,000	\$3,600,000	(\$100,000)		
Human Factors Psychology The	\$4 500 000 "bottom line" has	\$3,150,000	\$1,350,000		
	reased through a	\$4,500,000	\$2.500.000		
English Lite	across the board budget cut	\$3,600,000	(\$1,600,000)		
Campus Total	<u>\$33,000,000</u>	\$27,900,000	\$5,100,000		

The Transportation Method:

- All variables in the organization are equated to a single measurement unit –
 - Airlines use Available Seat Miles (ASM's)
 - Costs are divided by the ASM's to produce a unit cost per seat mile
 - Example: Total Costs = \$1,000,000; Total ASM's = 10,000,000; So \$1,000,000 / 10,000,000 = \$0.10
- It can be difficult to place values on individual routes due to many sets of complex and dynamic variables

The Transportation Method

- Using ASM's as the standard measure overcomes these issues and puts everything on a level playing field.
- Routes composed of a compilation of legs.
- Each leg is valued by the compilation of flights that make up that leg.



What We Did

Campus Results – end of FY09 (June 30, 2009).

FY09 Campus Total	Program				
Results	Gain/(Loss)				
Academic Total	\$ (3,380,000)				

Campus Results - end of FY10 (June 30, 2010).

FY10 Campus Total Results	Program Gain/(Loss)				
Academic Total	\$ 512,000				

NO degree programs eliminated

NO student services have suffered

Several areas saw budget increases

This model helps managers understand expense behaviors and relationships to activity levels.

How It Works

- It all starts with the revenue
 - Actual tuition billed to the students by degree program.
 - Our newest modeling will break this revenue out by the colleges that own the courses students enrolled in.
 - This will provide an illustration of revenue generated not just by degree program but by the courses that the students took.
 - Actual institutionally funded scholarships (IFS) awards (i.e.-the discount)
 - These awards are spread across the courses taken by the students according to their actual award amounts.
 - These values are subtracted from gross revenue to show a net revenue value by program and courses.

How It Works

- Expenses are driven primarily by salaries of faculty for courses the students enrolled in.
- Expense distribution is based on activity levels of student credit hours generated from actual course enrollments by students.
 - SCH mapping provides clear illustrations of actual faculty teaching contributions.
 - This illustrates how students in a major actually take courses, not how we think they take courses.

Key Discoveries

- DO NOT eliminate money losing programs right away.
 - Their associated revenue stream goes away immediately.
 - Expenses don't go away for several years after.
 - Sometimes the expenses simply re-distribute across other remaining programs and will reduce those programs economic gains.
- Identify why the program is losing money and develop a corrective action plan.

Key Discoveries

- Some programs may always lose money regardless of what an organization does.
 - Engineering programs are examples of this.
 - In these cases the campus should benchmark against other programs, externally, to see if their own effectiveness and efficiencies are balanced and appropriate.

Sample Institution

Economic Cross Contribution Model for FY2010

									Total Direct	Total Indirect Expenses (Administration	Overall	Total Cost to		Cost to deliver
		Gross Revenue	IFS Dollars	Net Revenue	CoAS Expenses	CoT Expenses	CoB Expenses	CoE Expenses	Expenses	and Overhead)	Yield	Deliver Programs	Total Students	student
Academic - Total		\$ 185,042,002	\$ 24,333,500	\$ 160,708,502	\$ 19,095,126	\$ 48,586,394	\$ 8,660,668	\$ 15,764,280	\$ 92,106,468	\$ 35,086,514	\$ 0.26	\$ 127,192,982	6,389	\$ 19,908
College of Arts & Sciences - Total		\$ 10,309,231	\$ 1,938,812	\$ 8,370,418	\$ 4,523,589	\$ 527,097	\$ 206,800	\$ 530,318	\$ 5,787,803	\$ 2,508,556	\$ 0.01	\$ 8,296,359	378	\$ 21,948
Literature Studies		\$ 2,496,462	\$ 431,655	\$ 2,064,808	\$ 546,871	\$ 291,343	\$ 88,225	\$ 28,555	\$ 954,993	\$ 617,919	\$ 0.31	\$ 1,572,913	92	\$ 17,097
Communications		\$ 1,009,901	\$ 147,264	\$ 862,638	\$ 321,627	\$ 62,208	\$ 44,577	\$ 675	\$ 429,087	\$ 248,354	\$ 0.27	\$ 677,441	36	\$ 18,818
Biology	Db-l	\$ 3,056,936	\$ 654,163	\$ 2,402,774	\$ 1,661,237	\$ 22,827	\$ 13,408	\$ 393,743	\$ 2,091,215	\$ 738,357	\$ (0.15)	\$ 2,829,571	97	\$ 29,171
Psychology	Bachelor	\$ 1,368,515	\$ 238,088	\$ 1,130,427	\$ 665,733	\$ 31,814	\$ 25,556	\$ 10,225	\$ 733,328	\$ 328,044	\$ 0.07	\$ 1,061,372	50	\$ 21,227
Applied Physics		\$ 787,327	\$ 230,742	\$ 556,584	\$ 473,279	\$ 10,476	\$ 1,709	\$ 49,143	\$ 534,607	\$ 192,391	\$ (0.23)	\$ 726,997	27	\$ 26,926
Still Exploring (Arts & Sciences)		\$ 551,297	\$ 110,456	\$ 440,841	\$ 127,219	\$ 58,125	\$ 25,945	\$ 24,282	\$ 235,570	\$ 184,138	\$ 0.05	\$ 419,708	29	\$ 14,473
Biology - Master	Master	\$ 372,671	\$ 51,027	\$ 321,644	\$ 204,098	\$ 9,122	\$ 7,380	\$ 23,696	\$ 244,296	\$ 69,890	\$ 0.02	\$ 314,186	16	\$ 19,637
Psychology - Master	Master	\$ 666,122	\$ 75,418	\$ 590,703	\$ 523,526	\$ 41,182	\$ -	\$ -	\$ 564,708	\$ 129,464	\$ (0.15)	\$ 694,172	31	\$ 22,393
College of Transportation - Total		\$ 67,685,761	\$ 10,767,751	\$ 56,918,010	\$ 5,900,862	\$ 17,792,448	\$ 2,879,878	\$ 240,319	\$ 26,813,507	\$ 17,263,568	\$ 0.29	\$ 44,077,076	2,451	\$ 17,983
Automotive Maintenance Science	Associate	\$ 216,061	\$ 5,571	\$ 210,490	\$ -	\$ 58,151	\$ -	\$ -	\$ 58,151	\$ 79,174	\$ 0.53	\$ 137,326	11	\$ 12,484
Aeronautical Science		\$ 36,646,953	\$ 6,113,109	\$ 30,533,843	\$ 3,266,651	\$ 10,047,587	\$ 1,373,003	\$ 97,838	\$ 14,785,078	\$ 9,753,632	\$ 0.24	\$ 24,538,711	1,346	\$ 18,231
Aeronautical Systems Maintenance**		\$ 76,404	\$ 5,773	\$ 70,630	\$ 3,569	\$ 25,205	\$ 15,324	\$ 14,102	\$ 58,199	\$ 26,821	\$ (0.17)	\$ 85,020	6	\$ 14,170
Martime Technology		\$ 6,614,668	\$ 760,994	\$ 5,853,674	\$ 417,814	\$ 1,412,767	\$ 347,919	\$ 4,093	\$ 2,182,593	\$ 1,316,818	\$ 0.67	\$ 3,499,410	187	\$ 18,713
Transportation Electronics		\$ 354,208	\$ 54,126	\$ 300,082	\$ 56,833	\$ 184,993	\$ 6,353	\$ 5,464	\$ 253,643	\$ 96,453	\$ (0.14)	\$ 350,096	12	\$ 29,175
Traffic Management	Bachelor	\$ 9,443,363	\$ 1,558,290	\$ 7,885,073	\$ 973,746	\$ 2,132,388	\$ 564,444	\$ 6,464	\$ 3,677,043	\$ 2,301,981	\$ 0.32	\$ 5,979,024	315	\$ 18,981
Applied Meteorology	Bacileioi	\$ 3,177,245	\$ 749,073	\$ 2,428,172		\$ 798,544	\$ 54,328	\$ 78,004	\$ 1,270,763	\$ 745,062	\$ 0.20	\$ 2,015,825	109	\$ 18,494
Automotive Maintenance Science		\$ 4,871,059	\$ 712,406	\$ 4,158,653	\$ 275,503	\$ 1,230,410	\$ 356,763	\$ 11,674	\$ 1,874,351	\$ 1,602,567	\$ 0.20	\$ 3,476,918	227	\$ 15,317
Logistic Management		\$ 3,235,332	\$ 527,420	\$ 2,707,912	\$ 337,076	\$ 676,561	\$ 61,302	\$ 8,926	\$ 1,083,865	\$ 680,330	\$ 0.53	\$ 1,764,195	100	\$ 17,642
Safety Science		\$ 1,148,480	\$ 161,179	\$ 987,301	\$ 72,143	\$ 365,773	\$ 22,086	\$ -	\$ 460,002	\$ 258,928	\$ 0.37	\$ 718,930	38	\$ 18,919
Still Exploring (Transportation)		\$ 136,861	\$ 24,919	\$ 111,942	\$ 24,137	\$ 27,107	\$ 9,745	\$ 2,671	\$ 63,661	\$ 52,869	\$ (0.04)	\$ 116,529	7	\$ 16,647
Transportation - Master	Master	\$ 1,765,128	\$ 94,890	\$ 1,670,238	\$ 133,502	\$ 832,962	\$ 68,612	\$ 11,084	\$ 1,046,159	\$ 348,933	\$ 0.20	\$ 1,395,093	93	
College of Business - Total		\$ 10,192,286	\$ 1,254,806	\$ 8,937,480	\$ 619,564	\$ 247,170	\$ 5,035,682	\$ 5,441	\$ 5,907,857	\$ 2,471,161	\$ 0.07	\$ 8,379,017	439	\$ 19,087
Management		\$ 522,242	\$ 69,594	\$ 452,648	\$ 9,310	\$ 10,123		'	\$ 290,540	\$ 138,490	\$ 0.06	\$ 429,030	20	
Business Administration	Bachelor	\$ 7,415,105	\$ 1,048,108	\$ 6,366,997	\$ 589,409	\$ 204,200	\$ 2,531,135	\$ 5,229	\$ 3,329,973	\$ 1,808,884	\$ 0.24	\$ 5,138,856	264	\$ 19,465
Still Exploring (Business)		\$ 42,523	\$ 6,923	\$ 35,600	\$ 10,110	\$ 4,146	\$ 16,673	\$ -	\$ 30,929	\$ 22,953	\$ (0.34)	\$ 53,882	3	\$ 17,961
Business Administration - Management (Online)	Master	\$ 500,553	Ψ	\$ 500,553		\$ 4,501			\$ 783,754	\$ 157,832	\$ (0.47)	\$ 941,587	61	\$ 15,436
Master of Business Administration	iviastei	\$ 1,711,863	\$ 130,181	\$ 1,581,682	\$ 10,736	\$ 24,199	\$ 1,437,514	\$ 212	\$ 1,472,661	\$ 343,002	\$ (0.13)	\$ 1,815,663	91	\$ 19,952
College of Engineering - Total		\$ 48,201,358	\$ 10,367,536	\$ 37,833,822			<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>		\$ 0.04	\$ 36,464,013	1,775	\$ 20,543
Aerospace Engineering		\$ 37,955,631	\$ 8,319,951	\$ 29,635,681		,	\$ 332,181	\$ 10,268,904	<u> </u>	·	\$ 0.06	\$ 27,882,171	1,390	\$ 20,059
Civil Engineering		\$ 1,016,319	\$ 235,994	\$ 780,324	\$ 168,269	\$ 1,602	\$ 2,702	\$ 565,216	\$ 737,789	\$ 269,501	\$ (0.23)	\$ 1,007,290	35	\$ 28,780
Computer Engineering		\$ 1,264,230	\$ 344,801	\$ 919,429	\$ 197,724	\$ 15,722	\$ 22,022	\$ 567,857	\$ 803,325	\$ 330,881	\$ (0.19)	\$ 1,134,205	44	\$ 25,777
Computer Science	Bachelor	\$ 96,194	\$ 17,143	\$ 79,052	\$ 7,874	\$ 1,471	\$ 7,092	\$ 12,119	\$ 28,556	\$ 17,537	\$ 0.72	\$ 46,093	3	\$ 15,364
Electrical Engineering	Bacileioi	\$ 964,053	\$ 105,875	\$ 858,178	\$ 126,638	\$ 11,446	\$ 26,455	\$ 650,193	\$ 814,733	\$ 230,559	\$ (0.18)	\$ 1,045,292	34	\$ 30,744
Mechanical Engineering		\$ 2,185,462	\$ 499,075	\$ 1,686,387	\$ 320,240	\$ 30,926	\$ 36,765	\$ 719,608	\$ 1,107,539	\$ 507,540	\$ 0.04	\$ 1,615,079	74	\$ 21,825
Software Engineering		\$ 1,257,934	\$ 274,292	\$ 983,642	·		, ,	-, -	· · · · · · · · · · · · · · · · · · ·		\$ (0.24)	, , , , , ,	47	\$ 27,616
Still Exploring (Engineering)		\$ 1,270,916	\$ 245,949	Ψ 1/02 1/507	\$ 242,196		· · · · · ·		· · · · · ·	<u> </u>	\$ 0.40		38	\$ 19,286
Aerospace Engineering - Master		\$ 1,529,072	\$ 243,192	\$ 1,285,880	·		, ,	, ,	\$ 779,684		\$ 0.20	\$ 1,075,233	79	\$ 13,611
Mechanical Engineering - Master	Master	T ===/:::	\$ -	\$ 120,777		·	\$ -	\$ 103,013	\$ 103,013	, , , ,	\$ (0.04)	\$ 125,450	5	\$ 25,090
Software Engineering - Master		\$ 540,771	\$ 81,265	\$ 459,505	\$ 5,399	\$ -	\$ -	\$ 408,791	\$ 414,190	\$ 88,200	\$ (0.09)	\$ 502,390	26	\$ 19,323
Non-degree/Other	Non-Degree	\$ 934,755	\$ 1,629	\$ 933,126	\$ 54,337	\$ 10,596	\$ 26,584	\$ 7,816	\$ 99,333	\$ 88,716	\$ 3.96	\$ 188,050	12	\$ 15,671
Non-degree/Special		\$ 398,586	\$ 2,965	\$ 395,621	\$ 79,963	\$ 45,498	\$ 22,506	\$ 71,146	\$ 219,112	\$ 119,406	\$ 0.17	\$ 338,518	21	\$ 16,120
Flight - Total		\$ 47,320,025	\$ -	\$ 47,320,025		\$ 29,449,948			\$ 29,449,948	\$ -	\$ 0.61	\$ 29,449,948	1,346	\$ 21,880

Full-time Faculty Salary and Benefits (Combined): Summer B 2009 - Summer A/C 2010 Distributed by SCH across the actual courses and program of students they taught Rows = Degree Program of Students; Columns = Home College of Faculty

		Rows = Degree Program				College of Arts &	College of		1
				TOTAL		Sciences	Transportation	College of Business	College of Engineering
			S	ALARY+BENEFITS	SA	LARY+BENEFITS	SALARY+BENEFITS	SALARY+BENEFITS	SALARY+BENEFITS
College of Arts & Sciences	Bachelor	Literature Studies	\$	153,818	\$	119,383	\$ 16,434	\$ 12,472	\$ 5,529
		Communications	\$	1,011	\$	311,011	\$ 60,027	\$ 41,235	\$ 635
		Biology	\$	803,301	\$	540,388	\$ 3,427	\$ 1,220	\$ 258,266
		Psychology	\$	292,774	\$	254,170	\$ 17,790	\$ 6,019	\$ 14,795
		Applied Physics	\$	387,255	\$	225,699	\$ 84,301	\$ 55,140	\$ 22,114
		Still Exploring (Arts & Sciences)	\$	59,084	\$	28,175	\$ 16,104	\$ 8,008	\$ 6,798
	Master	Biology - Master	\$	193,447	\$	180,629	\$ -	\$ -	\$ 12,817
		Psychology - Master	\$	288,808	\$	265,249	\$ 20,172	\$ 696	\$ 2,691
College of Transportation	Associate	Automotive Maintenance Science	\$	11,847	\$	4,805	\$ 4,687	\$ 1,013	\$ 1,341
	Bachelor	Aeronautical Science	\$	4,895,615		1,229,541	\$ 3,198,948		
		Aeronautical Systems Maintenance**	\$	16,693	\$	516	\$ 13,922		
		Martime Technology	\$	1,039,217	\$	203,186	\$ 634,657	\$ 190,725	\$ 10,648
		Transportation Electronics	\$	123,457	\$	33,219			\$ 55,151
		Traffic Management	\$	1,242,620	\$	437,067	\$ 587,282	\$ 198,686	\$ 19,586
		Applied Meteorology	\$	542,552	\$	171,906	\$ 331,260	\$ 11,165	\$ 28,221
		Automotive Maintenance Science	\$	489,870	\$	140,551	\$ 221,211		\$ 17,667
		Logistic Management	\$	595,496		261,038			
		Safety Science	\$	110,532		30,683	\$ 70,582		
		Still Exploring (Transportation)	\$	31,235		11,358	\$ 15,545		
	Master	Transportation - Master	\$	590,085	\$	64,141			
College of Business	Bachelor	Management	\$	64,151	\$	2,059	\$ 1,995		
		Business Administration	\$	1,420,622	\$	241,859	\$ 72,655		
		Still Exploring (Business)	\$	3,991	\$	1,243	\$ 469	\$ 2,279	
	Master	Business Administration - Management (Online)	\$	288,960	\$	-	\$ -	\$ 288,960	\$ -
		Master of Business Administration	\$	772,228	\$	140	\$ 3,937	\$ 768,151	
College of Engineering	Bachelor	Aerospace Engineering	\$	7,317,201	\$	2,878,519		\$ 87,952	
		Civil Engineering	\$	379,951	\$	57,103	\$ 1,514	\$ 2,893	
		Computer Engineering	\$	382,742	\$	101,240		\$ 6,195	
		Computer Science	\$	29,671	\$	7,079	\$ 1,843	\$ 920	
		Electrical Engineering	\$	334,342	\$	55,405	\$ 2,875	\$ 3,452	,
		Mechanical Engineering	\$	682,122	\$	195,159			
		Software Engineering	\$	384,933	\$	68,345	\$ 8,932	\$ 5,283	
		Still Exploring (Engineering)	\$	150,840		85,089	\$ 4,154	\$ 1,214	
	Master	Aerospace Engineering - Master	\$	668,630		45,320	\$ -	\$ 8,782	
		Mechanical Engineering - Master	\$	121,757		14,264		\$ -	\$ 107,493
		Software Engineering - Master	\$	259,955	_	9,891	\$ 1,878		
Non-Degree/Other	Nondegree	Non-degree/Other	\$	10,858	_	894	\$ 8,030		· /
		Non-degree/Special	\$	93,614		19,491		\$ 6,706	
Total			\$	25,439,692	\$	8,143,088	\$ 6,324,701	\$ 3,369,118	\$ 7,602,784

Notes: Excludes the following - Co-ops, internships, Worldwide-online courses, and inactive (withdrawn) students.

Student Credit Hours (SCH): Summer B 2009 - Summer A/C 2010 Rows = Degree program of students; Columns = College that "owns" the course taken by these students (regardless of whether or not the course taken was "in program")

			IOTAL	CoA&S	Col	СоВ	CoE
			SCH	SCH	SCH	SCH	SCH
TOTAL			157941	56476	48910	15662	336
College of Arts &	Bachelor	Literature Studies	978	745	80	90	
Sciences		Communications	313	97	43	35	
		Biology	3456	2359	17	10	10
		Psychology	1719	1427	121	24	
		Applied Physics	2691	1527	588	326	
		Still Exploring (Arts & Sciences)	536	292	126	64	
	Master	Biology - Master	367	339	7		
		Psychology - Master	911	799	90	3	
College of	Associate	Automotive Maintenance Science	1213	52	1136	10	
Transportation	Bachelor	Aeronautical Science	39157	11249	23282	2858	1
		Aeronautical Systems Maintenance**	27	3	16	7	
		Martime Technology	8096	1958	4661	985	
		Transportation Electronics	425	211	150	21	
		Traffic Management	9438	3185	4736	1281	
		Applied Meteorology	3724	1372	1916	56	
		Automotive Maintenance Science	7385	1327	4932	947	
		Logistic Management	5385	2282	2501	177	
		Safety Science	1060	313	655	70	
		Still Exploring (Transportation)	212	107	64	17	
	Master	Transportation - Master	2081	22	1972	49	
College of Business	Bachelor	Management	283	19	56	209	
		Business Administration	8242	2315	553	5217	
		Still Exploring (Business)	32	10	3	19	
	Master	Business Administration - Management (Online)	640			640	
		Master of Business Administration	1634	7	27	1601	
College of Engineering	Bachelor	Aerospace Engineering	44216	19213	821	550	22
		Civil Engineering	1209	423	17	56	
		Computer Engineering	1653	715	92	66	
		Computer Science	118	39	10	14	
		Electrical Engineering	911	413	10	35	
		Mechanical Engineering	3485	1373	26	104	1
M		Software Engineering	1260	425	64	56	
		Still Exploring (Engineering)	438	273	31	14	
	Master	Aerospace Engineering - Master	1883	218	3	21	1
		Mechanical Engineering - Master	350	26			
		Software Engineering - Master	589	42	14	17	
Non-Degree/Other	Nondegree	Non-degree/Other	113	57	45	3	
		Non-degree/Special	491	142	81	35	

Notes: Excludes the following - Co-ops, internships, Worldwide-online courses, and inactive (withdrawn) students.