



# Program Valuation and Performance Management

Florida Association of Institutional Research  
Annual Conference

February 18, 2011 – Howey-In-The-Hills, FL

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**EMBRY-RIDDLE**  
Aeronautical University

FLORIDA | ARIZONA | WORLDWIDE

# The Scenario Faced By Most

| <b>Program</b>           | <b>Revenue</b>      | <b>Expense</b>      | <b>Contribution</b> |
|--------------------------|---------------------|---------------------|---------------------|
| 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>      | <u>\$33,000,000</u> | <u>\$31,000,000</u> | <u>\$2,000,000</u>  |

# 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>      | <u>\$33,000,000</u> | <u>\$31,000,000</u> | <u>\$2,000,000</u> |

# Results Of That Approach ...

| Program                  | Revenue             | Expense             | Contribution       |
|--------------------------|---------------------|---------------------|--------------------|
| Mechanical Engineering   | \$4,000,000         | \$3,100,000         | \$900,000          |
| Civil Engineering        | \$4,000,000         | \$4,050,000         | (\$50,000)         |
| Software Engineering     | \$5,500,000         | \$3,600,000         | \$1,900,000        |
| Clinical Psychology      | \$3,500,000         | \$3,600,000         | (\$100,000)        |
| Human Factors Psychology | \$4,500,000         | \$3,150,000         | \$1,350,000        |
| Political Science        | \$4,500,000         | \$2,000,000         | \$2,500,000        |
| English Literature       | \$3,600,000         | \$5,200,000         | (\$1,600,000)      |
| <b>Campus Total</b>      | <b>\$33,000,000</b> | <b>\$27,900,000</b> | <b>\$5,100,000</b> |

**But there are still negative margins in the same 3 degree programs ...**

**The "bottom line" has increased through a 10% across the board budget cut**

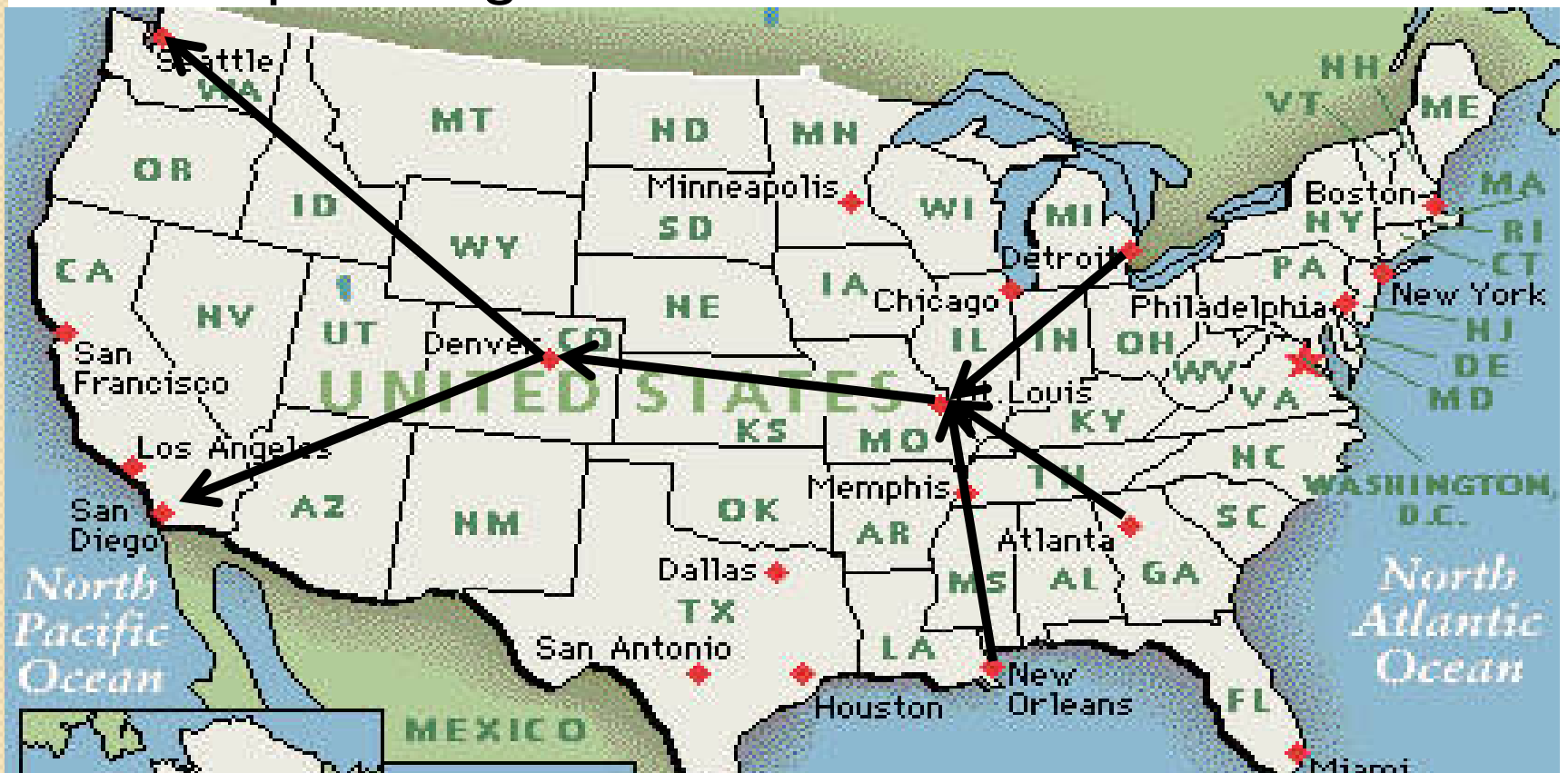


# The Transportation Method:

- 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).**

| <b>FY09 Campus Total Results</b> | <b>Program Gain/(Loss)</b> |
|----------------------------------|----------------------------|
| Academic Total                   | \$ (3,380,000)             |

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

| <b>FY10 Campus Total Results</b> | <b>Program Gain/(Loss)</b> |
|----------------------------------|----------------------------|
| 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

|   |                   | Gross Revenue  | IFS Dollars   | Net Revenue    | CoAS Expenses | CoT Expenses  | CoB Expenses | CoE Expenses  | Total Direct Expenses | Total Indirect Expenses (Administration and Overhead) | Overall Yield | Total Cost to Deliver Programs | Total Students | Cost to deliver program per student |           |
|---|-------------------|----------------|---------------|----------------|---------------|---------------|--------------|---------------|-----------------------|---|---------------|--------------------------------|----------------|-------------------------------------|-----------|
| <b>Academic - Total</b>                       |                   | \$ 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                           |           |
| <b>College of Arts &amp; Sciences - Total</b> |                   | \$ 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                            | Bachelor          | \$ 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                                       |                   | \$ 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                                    |                   | \$ 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                           | \$ 666,122        |                | \$ 75,418     | \$ 590,703     | \$ 523,526    | \$ 41,182     | \$ -         | \$ -          | \$ 564,708            | \$ 129,464  | \$ (0.15)     | \$ 694,172                     | 31             | \$ 22,393                           |           |
| <b>College of Transportation - Total</b>      |                   | \$ 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                          | Bachelor          | \$ 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                            |                   | \$ 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                           |                   | \$ 3,177,245   | \$ 749,073    | \$ 2,428,172   | \$ 339,887    | \$ 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             | \$ 15,001                           |           |
| <b>College of Business - Total</b>            |                   | \$ 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                                    | Bachelor          | \$ 522,242     | \$ 69,594     | \$ 452,648     | \$ 9,310      | \$ 10,123     | \$ 271,106   | \$ -          | \$ 290,540            | \$ 138,490  | \$ 0.06       | \$ 429,030                     | 20             | \$ 21,451                           |           |
| Business Administration                       |                   | \$ 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     | \$ -          | \$ 500,553     | \$ -          | \$ 4,501      | \$ 779,253   | \$ -          | \$ 783,754            | \$ 157,832  | \$ (0.47)     | \$ 941,587                     | 61             | \$ 15,436                           |           |
| Master of Business Administration             |                   | \$ 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                           |           |
| <b>College of Engineering - Total</b>         |                   | \$ 48,201,358  | \$ 10,367,536 | \$ 37,833,822  | \$ 7,916,811  | \$ 513,638    | \$ 489,218   | \$ 14,909,240 | \$ 23,828,907         | \$ 12,635,106   | \$ 0.04       | \$ 36,464,013                  | 1,775          | \$ 20,543                           |           |
| Aerospace Engineering                         | Bachelor          | \$ 37,955,631  | \$ 8,319,951  | \$ 29,635,681  | \$ 6,644,653  | \$ 388,414    | \$ 332,181   | \$ 10,268,904 | \$ 17,634,152         | \$ 10,248,019   | \$ 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                              |                   | \$ 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                        |                   | \$ 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     | \$ 151,215    | \$ 21,179     | \$ 37,144    | \$ 746,437    | \$ 955,975            | \$ 341,970  | \$ (0.24)     | \$ 1,297,946                   | 47             | \$ 27,616                           |           |
| Still Exploring (Engineering)                 |                   | \$ 1,270,916   | \$ 245,949    | \$ 1,024,967   | \$ 242,196    | \$ 37,640     | \$ 22,925    | \$ 147,192    | \$ 449,953            | \$ 282,912  | \$ 0.40       | \$ 732,865                     | 38             | \$ 19,286                           |           |
| Aerospace Engineering - Master                |                   | Master         | \$ 1,529,072  | \$ 243,192     | \$ 1,285,880  | \$ 52,602     | \$ 5,237     | \$ 1,933      | \$ 719,911            | \$ 779,684  | \$ 295,549    | \$ 0.20                        | \$ 1,075,233   | 79                                  | \$ 13,611 |
| Mechanical Engineering - Master               |                   |                | \$ 120,777    | \$ -           | \$ 120,777    | \$ -          | \$ -         | \$ -          | \$ 103,013            | \$ 103,013  | \$ 22,437     | \$ (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                           |           |
| <b>Non-degree/Other</b>                       | <b>Non-Degree</b> | \$ 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                           |           |
| <b>Non-degree/Special</b>                     |                   | \$ 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                           |           |
| <b>Flight - Total</b>                         |                   | \$ 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**

|                               |                                  |   | TOTAL                | College of Arts & Sciences | College of Transportation | College of Business | College of Engineering |
|-------------------------------|----------------------------------|---|----------------------|----------------------------|---------------------------|---------------------|------------------------|
|                               |                                  |   | SALARY+BENEFITS      | SALARY+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              | \$ 359,471          | \$ 107,655             |
|                               |                                  | Aeronautical Systems Maintenance**            | \$ 16,693            | \$ 516                     | \$ 13,922                 | \$ 2,256            | \$ -                   |
|                               |                                  | Martime Technology                            | \$ 1,039,217         | \$ 203,186                 | \$ 634,657                | \$ 190,725          | \$ 10,648              |
|                               |                                  | Transportation Electronics                    | \$ 123,457           | \$ 33,219                  | \$ 31,807                 | \$ 3,280            | \$ 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                | \$ 110,442          | \$ 17,667              |
|                               |                                  | Logistic Management                           | \$ 595,496           | \$ 261,038                 | \$ 298,678                | \$ 24,399           | \$ 11,382              |
|                               |                                  | Safety Science                                | \$ 110,532           | \$ 30,683                  | \$ 70,582                 | \$ 8,209            | \$ 1,058               |
|                               | Still Exploring (Transportation) | \$ 31,235                                     | \$ 11,358            | \$ 15,545                  | \$ 1,504                  | \$ 2,828            |                        |
| Master                        | Transportation - Master          | \$ 590,085                                    | \$ 64,141            | \$ 504,913                 | \$ 18,275                 | \$ 2,756            |                        |
| College of Business           | Bachelor                         | Management                                    | \$ 64,151            | \$ 2,059                   | \$ 1,995                  | \$ 60,097           | \$ -                   |
|                               |                                  | Business Administration                       | \$ 1,420,622         | \$ 241,859                 | \$ 72,655                 | \$ 1,098,816        | \$ 7,291               |
|                               |                                  | 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               | \$ 104,660                | \$ 87,952           | \$ 4,246,070           |
|                               |                                  | Civil Engineering                             | \$ 379,951           | \$ 57,103                  | \$ 1,514                  | \$ 2,893            | \$ 318,441             |
|                               |                                  | Computer Engineering                          | \$ 382,742           | \$ 101,240                 | \$ 11,737                 | \$ 6,195            | \$ 263,570             |
|                               |                                  | Computer Science                              | \$ 29,671            | \$ 7,079                   | \$ 1,843                  | \$ 920              | \$ 19,830              |
|                               |                                  | Electrical Engineering                        | \$ 334,342           | \$ 55,405                  | \$ 2,875                  | \$ 3,452            | \$ 272,608             |
|                               |                                  | Mechanical Engineering                        | \$ 682,122           | \$ 195,159                 | \$ 1,402                  | \$ 10,205           | \$ 475,356             |
|                               |                                  | Software Engineering                          | \$ 384,933           | \$ 68,345                  | \$ 8,932                  | \$ 5,283            | \$ 302,374             |
|                               |                                  | Still Exploring (Engineering)                 | \$ 150,840           | \$ 85,089                  | \$ 4,154                  | \$ 1,214            | \$ 60,383              |
|                               | Master                           | Aerospace Engineering - Master                | \$ 668,630           | \$ 45,320                  | \$ -                      | \$ 8,782            | \$ 614,528             |
|                               |                                  | Mechanical Engineering - Master               | \$ 121,757           | \$ 14,264                  | \$ -                      | \$ -                | \$ 107,493             |
| Software Engineering - Master |                                  | \$ 259,955                                    | \$ 9,891             | \$ 1,878                   | \$ 3,377                  | \$ 244,809          |                        |
| Non-Degree/Other              | Nondegree                        | Non-degree/Other                              | \$ 10,858            | \$ 894                     | \$ 8,030                  | \$ 380              | \$ 1,554               |
|                               |                                  | Non-degree/Special                            | \$ 93,614            | \$ 19,491                  | \$ 23,925                 | \$ 6,706            | \$ 43,493              |
| <b>Total</b>                  |                                  |   | <b>\$ 25,439,692</b> | <b>\$ 8,143,088</b>        | <b>\$ 6,324,701</b>       | <b>\$ 3,369,118</b> | <b>\$ 7,602,784</b>    |

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")

|                            |                                   |   | TOTAL      | CoA&S | CoI   | CoB   | CoE   |
|----------------------------|-----------------------------------|---|------------|-------|-------|-------|-------|
|                            |                                   |   | SCH        | SCH   | SCH   | SCH   | SCH   |
| DB                         | TOTAL                             |   | 157941     | 56476 | 48910 | 15662 | 33634 |
| College of Arts & Sciences | Bachelor                          | Literature Studies                            | 978        | 745   | 80    | 90    | 53    |
|                            |                                   | Communications                                | 313        | 97    | 43    | 35    | 12    |
|                            |                                   | Biology                                       | 3456       | 2359  | 17    | 10    | 1027  |
|                            |                                   | Psychology                                    | 1719       | 1427  | 121   | 24    | 126   |
|                            |                                   | Applied Physics                               | 2691       | 1527  | 588   | 326   | 130   |
|                            |                                   | Still Exploring (Arts & Sciences)             | 536        | 292   | 126   | 64    | 44    |
|                            | Master                            | Biology - Master                              | 367        | 339   | 7     |       | 21    |
|                            | Psychology - Master               | 911   | 799        | 90    | 3     | 3     |       |
| College of Transportation  | Associate                         | Automotive Maintenance Science                | 1213       | 52    | 1136  | 10    | 15    |
|                            | Bachelor                          | Aeronautical Science                          | 39157      | 11249 | 23282 | 2858  | 1006  |
|                            |                                   | Aeronautical Systems Maintenance**            | 27         | 3     | 16    | 7     |       |
|                            |                                   | Martime Technology                            | 8096       | 1958  | 4661  | 985   | 111   |
|                            |                                   | Transportation Electronics                    | 425        | 211   | 150   | 21    | 37    |
|                            |                                   | Traffic Management                            | 9438       | 3185  | 4736  | 1281  | 159   |
|                            |                                   | Applied Meteorology                           | 3724       | 1372  | 1916  | 56    | 193   |
|                            |                                   | Automotive Maintenance Science                | 7385       | 1327  | 4932  | 947   | 167   |
|                            |                                   | Logistic Management                           | 5385       | 2282  | 2501  | 177   | 115   |
|                            |                                   | Safety Science                                | 1060       | 313   | 655   | 70    | 10    |
|                            |                                   | Still Exploring (Transportation)              | 212        | 107   | 64    | 17    | 20    |
|                            | Master                            | Transportation - Master                       | 2081       | 22    | 1972  | 49    | 7     |
|                            | College of Business               | Bachelor                                      | Management | 283   | 19    | 56    | 209   |
| Business Administration    |                                   |   | 8242       | 2315  | 553   | 5217  | 64    |
| 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   | 22714 |
|                            |                                   | Civil Engineering                             | 1209       | 423   | 17    | 56    | 665   |
|                            |                                   | Computer Engineering                          | 1653       | 715   | 92    | 66    | 734   |
|                            |                                   | Computer Science                              | 118        | 39    | 10    | 14    | 51    |
|                            |                                   | Electrical Engineering                        | 911        | 413   | 10    | 35    | 445   |
|                            |                                   | Mechanical Engineering                        | 3485       | 1373  | 26    | 104   | 1933  |
|                            |                                   | Software Engineering                          | 1260       | 425   | 64    | 56    | 688   |
|                            |                                   | Still Exploring (Engineering)                 | 438        | 273   | 31    | 14    | 113   |
|                            | Master                            | Aerospace Engineering - Master                | 1883       | 218   | 3     | 21    | 1623  |
|                            |                                   | Mechanical Engineering - Master               | 350        | 26    |       |       | 324   |
|                            |                                   | Software Engineering - Master                 | 589        | 42    | 14    | 17    | 516   |
| Non-Degree/Other           | Nondegree                         | Non-degree/Other                              | 113        | 57    | 45    | 3     | 7     |
|                            |                                   | Non-degree/Special                            | 491        | 142   | 81    | 35    | 233   |

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