University of Maryland

Women in Sciences - Faculty Climate Project Gender Equity Analysis

Office of Institutional Research and Planning January 12, 2006

<u>**Overview**</u> – A workgroup convened by the Provost is examining equity issues for tenured and tenure-track men and women in the three science colleges at the University: CLFS, CMPS, and ENGR.

<u>**Purpose**</u> – In support of this effort, OIRP explored the teaching activity of men and women and examined salary equity for these colleges. Teaching activity includes the number of courses taught, the number of students taught and faculty workload. Results for all colleges are presented in aggregate and are sometimes presented separately for each college. The following questions were developed as guidelines for the analysis:

- 1. What is the distribution of the faculty by gender for the three colleges?
- 2. Who teaches more students men or women?
- 3. Who teaches more courses men or women?
- 4. Does the difference in the average number of courses taught vary by term?
- 5. Who is teaching more independent study courses men or women?
- 6. What is the distribution of courses taught by level for men and women?
- 7. On average, do more men or women meet their actual load and adjusted load?
- 8. Are there salary disparities that could be attributable to gender?

<u>Data</u> – The following data for the fall and spring of 2001, 2002, 2003, 2004 and 2005^{1} were used for the productivity portion of this analysis (Section A). These data were analyzed by college, term, and gender.

- 1. Frequencies of faculty
- 2. Students by course
- 3. Courses by level
- 4. Met adjusted load and met load

The salary analysis for the tenured/tenure track faculty (Section B) uses data from Fall 2005 only. These data were analyzed in conjunction with the non-instructional productivity data from the faculty workload report.

¹ Only Spring 2005 data are used. The Fall of 2005 was excluded due to missing data.

<u>Methods</u> – Section A of the report presents descriptive data for faculty by gender, term, FT/PT status and college. Additionally, for each college we provide the following data by gender:

- 1) Average number of students per faculty member, using a t-test for significance
- 2) Average number of courses per faculty member, using a t-test for significance
- 3) Average number of students per course
- 4) Average number of independent studies courses
- 5) Percent of courses taught by level
- 6) Average adjusted load and average load by gender, college, and academic year

Section B of the report examines the average salary of male and female faculty after controlling for rank. Faculty productivity data are included in the analysis. Regression results of salary analysis model including rank, productivity measures, and gender are also presented.

Section A

Results

The highlights are presented first with the results organized by the set of questions presented earlier. The responses to these questions are presented for all science colleges combined and then by each individual college.

Highlights for All Colleges Combined

- 14% of the tenured/tenure track faculty in CLFS, CMPS and ENGR are female.
- On average, women taught more students than men in fall terms. On average, men taught more students than women in spring terms.
- On average, women taught the same number of courses as men as well as the same number of independent study courses as men.
- The distribution of courses taught by level was very similar for men and for women faculty. Only one course level grouping varied by more than one-percentage point the 500-699 course level group. Of all the courses that men taught, 14.7 % were in the 500-699 course level group, while 11.5% of the courses women taught were in this course grouping.
- The percentage of men and women meeting teaching workload expectations varied depending upon the year and college.

Results by Question

1) What is the distribution of faculty in the three colleges – CLFS, CMPS, and ENGR?

Table 1 shows frequencies of tenured/tenure track faculty by gender, college, and term for the three colleges, CLFS, CMPS, and ENGR. For the group of all colleges, the percentage of female tenured/tenure track faculty was 14% for all the years of the study. Yet, the number of female tenure/tenure track faculty increased from 55 to 65 tenured/tenure track faculty from Fall 2001 to Fall 2005.

- In CLFS, the number of female tenure/tenure track faculty was between 25, and 28 for the Fall and Spring terms of 2001, 2002, 2003, 2004 and Spring 2005. The total tenure/tenure track faculty count ranged from 82 to 102 per term for the same time period. Thus, approximately 25% of the faculty are women.
- In CMPS the percentage of women tenure/tenure track faculty ranged from 7% to 9% or 12 to 18 female faculty in this period.
- In ENGR, the percentage of women tenured/tenure track faculty ranged from 11% to 13% or 19 to 21 female faculty.

Table 1

		ENGR		CL	FS	v	(CMPS		F	TOTAL	
Term	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
2001 Fall	19	131	150	24	58	82	12	154	166	55	343	398
	13%	87%		29%	71%		7%	93%		14%	86%	
2002 Spring	19	132	151	25	59	84	13	154	167	57	345	402
	13%	87%		30%	70%		8%	92%		14%	86%	
2002 Fall	19	141	160	24	62	86	14	161	175	57	364	421
	12%	88%		28%	72%		8%	92%		14%	86%	
2003 Spring	19	145	164	25	62	87	15	162	177	59	369	428
	12%	88%		29%	71%		8%	92%		14%	86%	
2003 Fall	20	146	166	27	66	93	15	169	184	62	381	443
	12%	88%		29%	71%		8%	92%		14%	86%	
2004 Spring	20	149	169	27	66	93	14	168	182	61	383	444
	12%	88%		29%	71%		8%	92%		14%	86%	
2004 Fall	20	155	175	27	72	99	16	169	185	63	396	459
	11%	89%		27%	73%		9%	91%		14%	86%	
2005 Spring	21	154	175	27	72	99	16	171	187	64	397	461
	12%	88%		27%	73%		9%	91%		14%	86%	
2005 Fall	20	159	179	27	75	102	18	178	196	65	412	477
	11%	89%		26%	74%		9%	91%		14%	86%	

Tenured/Tenure Track Faculty in CLFS, CMPS and ENGR

2) Who teaches more students – men or women?

Figures 2a and 2b demonstrate that the average number of students taught by gender and term was greater for women for most of the fall terms and greater for men than for women in the spring terms. (See Table 2 in Appendix A for values used in the graphs.)

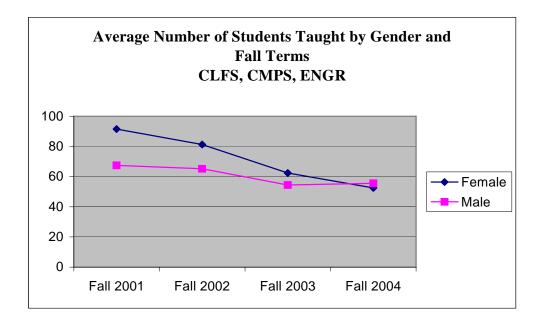
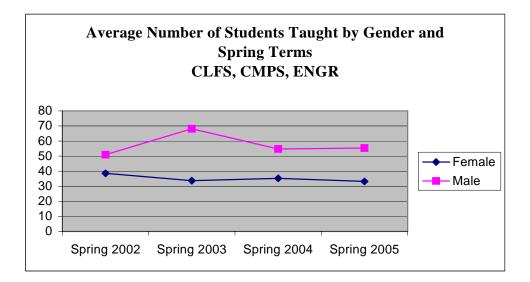




Figure 2	2b
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- For CLFS, men, on average, taught more students than women. The average number of students taught per faculty member ranged from 39 to 99 students per term for women faculty and from 62 to 108 students for men. (See Figure 2c in the Appendix A for the average number of students taught for men and women by term.)
- In CMPS, men, on average taught more students than women faculty. The average number of students per faculty member taught by men ranged from 48 to 71 in this time period. Women taught on average from 28 to 50 students depending upon the term. (See Figure 2d in Appendix A.)
- For ENGR, the average number of students taught per faculty was constant over multiple terms for male faculty (around 50 students per faculty). The average number of students taught per faculty member for women fluctuated between 33 and 105. (See Figure 2e and Table 2c in Appendix A.)

3) Is the average number of courses taught higher for men or for women?

For all colleges the number of courses taught was similar for men and women faculty. The mean number of courses per faculty member for all terms was 3.4 for males and 3.5 for females. This difference was not significant according to the results of the T-test (significance level of .449.)

- For CLFS, the average number of courses taught by men was slightly higher than the average number of courses taught by women. Means of 4.6 for males and 3.9 for females were obtained.
- In CMPS the average number of courses taught was 2.9 for male faculty and 2.8 for females.
- In ENGR, a slightly larger difference between the average number of courses taught by men and women existed -- 3.6 courses per faculty member per term for males and 4.1 for females.

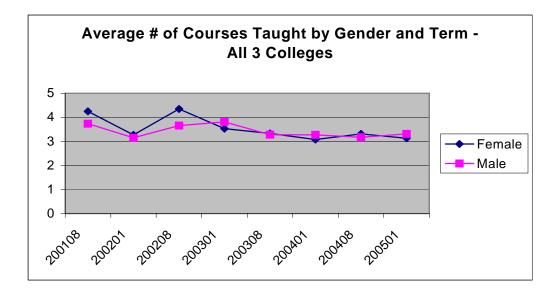
Table 3

Average Number of Courses Taught by Tenured/tenure track Faculty for (all terms combined)

	Males	Females
CLFS	4.6	3.9
CMPS	2.9	2.8
ENGR	3.6	4.1

4) Is there a difference between terms in the average number of courses taught by men and women?

For all colleges the average number of courses taught per term varied only slightly for men and women faculty. The average number of courses taught for women ranged from 3.1 to 4.3 from term to term. The average number of courses taught by men ranged from 3.2 to 3.7. (See Table 4 in the Appendix A for values used in the graphs.)





- For CLFS, there was some variation in the average number of courses taught per faculty member per term. More courses were taught by men than by women for most terms. (See Graph 3a and Table 4a in Appendix A.)
- In CMPS, there was only a slight variation in the average number of courses taught per term by male and by female faculty. (See Graph 3b and Table 4b in the Appendix A.)
- In ENGR, the average number of courses taught was similar for men and women with the exception of Fall 2001 and Fall 2003. (See Graph 3c and Table 4c in Appendix A.)
- 5. Who is teaching more independent study courses men or women?

For all colleges, the average number of independent study courses taught for all terms was the same for men and women faculty (2.0). These results are not significant using the T-test.

• For LFSC, on average, slightly more independent study courses were taught by men than by women. Means of 2.4 for males and 2.2 for females were obtained.

- In CMPS, the average number of independent study courses taught by male faculty was slightly higher than for female faculty. Means of 1.8 for men and 1.6 for women were obtained.
- In ENGR, on average per term, women taught 0.3 more independent study courses than men. Means of 2.4 for males and 2.7 for females were obtained.

6. What is the distribution of courses taught by level for men and women?

The distribution of courses taught by level was very similar for men and women. For all colleges, there was only one course grouping that had more than a one-percentage point difference between men and women. In the distribution of all courses taught by gender, 11.5% of the courses taught by women were in the 500-699 course grouping, while 14.7% of the courses taught by men were in this course grouping.

Table 5

Percentage of Courses Taught by Gender and Level (for all terms) All Three Colleges

		Female	Male	Total
100-299	Count	301	1742	2043
	Column %	18.6	17.6	17.8
300-499	Count	456	2717	3173
	Column %	28.3	27.5	27.6
500-699	Count	255	1455	1710
	Column %	15.8	14.7	14.9
700-898	Count	185	1449	1634
	Column %	11.5	14.7	14.2
899	Count	417	2508	2925
	Column %	25.8	25.4	25.5
Total	Count	1614	9871	11485
	Column %	100.0	100.0	100.0

- For LFSC, the percentage of total courses taught by level and gender was also explored. Percentage distribution shows women taught a slightly higher proportion of 899 level courses and a smaller proportion of 100-299 courses. (See Table 5a in Appendix A.)
- For CMPS and ENGR, the course level percentage distribution was very similar for men and women. There was a slightly greater proportion of women teaching 100-299 level courses. (See Tables 5b and 5c in Appendix A.)

7) As a percentage do more men or more women meet their actual load and adjusted load?

Female faculty met teaching expectations for FY2003 and FY2004 at a higher rate than men. While there is variation in the colleges, CMPS women met teaching expectations at higher rate than men for all fiscal years.

Table 6

% Meeting Teaching Workload Expectations

All	3 colleges		CLFS		CMPS		ENGR	
	Female	Male	Female	Male	Female	Male	Female	Male
2002	43%	48%	39%	44%	44%	40%	48%	61%
2003	54%	45%	45%	37%	60%	40%	61%	55%
2004	51%	50%	39%	40%	55%	46%	63%	59%
2005	47%	53%	33%	49%	52%	46%	61%	62%

Table 7

% Meeting Adjusted Teaching Workload Expectations

 All 3 colleges		CLFS		CMPS		ENGR	2	
	Female	Male	Female	Male	Female	Male	Female	Male
2002	74%	80%	75%	68%	88%	84%	62%	5 81%
2003	85%	5 77%	79%	67%	100%	79%	77%	5 81%
						• • • • •		
2004	74%	5 75%	60%	55%	95%	81%	74%	5 78%
2005	75%	5 77%	61%	62%	95%	81%	75%	80%
2005	15%) ////0	0170	02%	95%	0170	15%	> 00%

Discussion

Predicting time to tenure in a regression model was not possible in this analysis. Regression is not a good analytical tool because the population of faculty was so small. Preliminary analyses suggested that no significant difference was found between males and females on the time to tenure variable.

Section **B**

Faculty Salary Equity Analysis: Fall 2005

Highlights:

- No significance is found in male and female salary differences. Differences exist more at the full professor level than at the assistant professor level.
- The salary gap between male and female faculty is smaller in the sciences than at the university as a whole.

The University periodically undertakes a campus-wide review of potential salary disparities that could be attributable to gender. These reviews are restricted to tenured and tenure-track faculty. This analysis is an extension of the most recent salary study. The original study was modified slightly to examine salary equity in the sciences. The model is restricted to faculty in the colleges of CLFS, CMPS, and ENGR. The data are from fall 2005.

The first table in exhibit 1 illustrates the salary distribution by college and gender. As shown, this analysis is restricted to 62 females and 384 males in fulltime tenured or tenure-track positions. Faculty members with administrative responsibilities in academic departments (directors and departmental chairs) are excluded from the analysis. The subsequent tables in exhibit 1 present average salaries of men and women after controlling for faculty rank (See Appendix B).

Prior analyses have suggested a curvilinear relationship between salary and years in rank. Earlier research, for example, suggested that after approximately ten years as an associate professor, there was a negative relationship between time in rank and salary. Thus associate professors were defined as 'striving' (under 10 years in rank) or 'permanent'. Actual years in rank was also incorporated into the models.

Data regarding an individual's "non-instructional productivity" are available through the faculty activity reporting system. As in past analyses, refereed publications and grant awards are included in the analysis. These data represent three-year averages for each faculty member. These productivity data are presented in exhibit two.

A regression analysis was conducted using the aforementioned variables. The regression results are shown in exhibit three of Appendix B. The model explains approximately 45% of the variation in salaries between men and women. The coefficient for gender fails to attain statistical significance. Faculty rank, years of service, and several of the productivity variables (books, refereed publications, and grant amount –in thousands of dollars) were found to be statistically significant. The reference group was female assistant professors.

Notes for salary study: The modified study was conducted by the Office of Institutional Research and Planning, January 9, 2006. The original salary study was conducted in July 2004. Salary is measured on a 9.5 month basis. The faculty cohort includes only official faculty in academic departments.

Appendix A

Table 2Average Students by Gender and TermCMPS, CLFS, ENGR

		Mean	Students	Faculty
2001	Female	91.55	4486.00	N=49
Fall	Male	67.47	21861.00	N=324
2002	Female	38.58	2006.00	N=52
Spring	Male	50.89	16591.00	N=326
2002	Female	81.31	4391.00	N=54
Fall	Male	65.22	22436.00	N=344
2003	Female	33.74	1822.00	N=54
Spring	Male	68.17	23588.00	N=346
2003	Female	62.38	3618.00	N=58
Fall	Male	54.43	19594.00	N=360
2004	Female	35.26	2045.00	N=58
Spring	Male	54.74	19817.00	N=362
2004	Female	52.53	3152.00	N=60
Fall	Male	55.54	20660.00	N=372
2005	Female	33.16	2023.00	N=61
Spring	Male	55.32	20745.00	N=375

Figure 2c

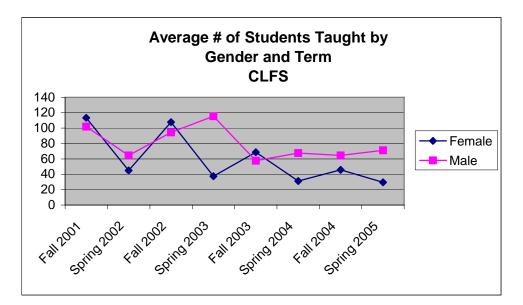


Table 2a

Average Students by Gender and Term **CLFS**

		Mean	Sum	Valid N
2001 Fall	Female	113.41	2495.00	N=22
	Male	102.02	5713.00	N=56
2002 Spring	Female	45.00	945.00	N=21
1 3	Male	64.58	3681.00	N=57
2002 Fall	Female	107.83	2480.00	N=23
	Male	94.50	5670.00	N=60
2003 Spring	Female	37.50	825.00	N=22
-1 5	Male	115.40	6924.00	N=60
2003 Fall	Female	68.75	1650.00	N=24
	Male	57.68	3576.00	N=62
2004 Spring	Female	31.28	782.00	N=25
1 3	Male	67.56	4256.00	N=63
2004 Fall	Female	45.69	1188.00	N=26
	Male	64.45	4318.00	N=67
2005 Spring	Female	29.64	741.00	N=25
-,	Male	71.10	4977.00	N=70

Figure 2d

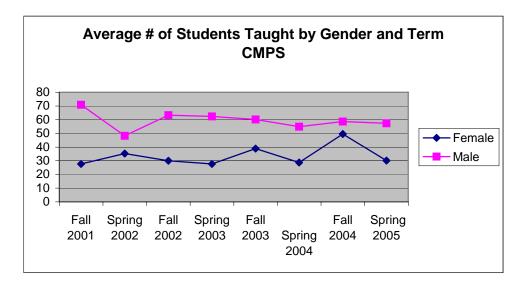


Table 2b

CMPS Average # of Students taught by gender and term

		Mean	Sum	Valid N
2001 Fall	Female	27.73	305.00	N=11
	Male	70.85	10132.00	N=143
2002 Spring	Female	35.31	459.00	N=13
	Male	48.26	6805.00	N=141
2002 Fall	Female	30.00	390.00	N=13
	Male	63.32	9435.00	N=149
2003 Spring	Female	27.71	388.00	N=14
	Male	62.42	9238.00	N=148
2003 Fall	Female	38.93	584.00	N=15
	Male	60.20	9572.00	N=159
2004 Spring	Female	28.71	402.00	N=14
	Male	54.86	8723.00	N=159
2004 Fall	Female	49.47	742.00	N=15
	Male	58.59	9258.00	N=158
2005 Spring	Female	30.13	482.00	N=16
-1 3	Male	57.34	9060.00	N=158

Figure 2e

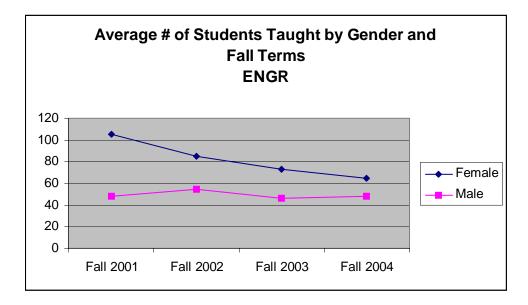
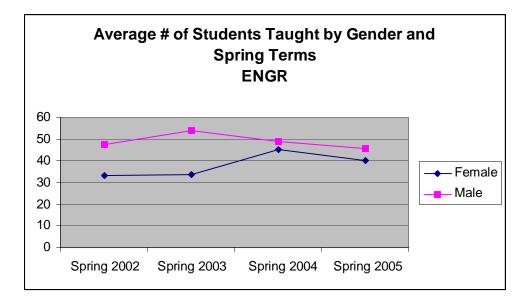


Table 2c



			ENGR			
		Mean	Students	Faculty		
2001 Fall	Female	105.38	1686.00	N=16		
	Male	48.13	6016.00	N=125		
2002 Spring	Female	33.44	602.00	N=18		
	Male	47.70	6105.00	N=128		
2002 Fall	Female	84.50	1521.00	N=18		
	Male	54.30	7331.00	N=135		
2003 Spring	Female	33.83	609.00	N=18		
1 0	Male	53.81	7426.00	N=138		
2003 Fall	Female	72.84	1384.00	N=19		
	Male	46.37	6446.00	N=139		
2004 Spring	Female	45.32	861.00	N=19		
-1 5	Male	48.84	6838.00	N=140		
2004 Fall	Female	64.32	1222.00	N=19		
	Male	48.19	7084.00	N=147		
2005 Spring	Female	40.00	800.00	N=20		
9	Male	45.63	6708.00	N=147		

Table 3 Average Students by gender and term

Table 4Average Courses per Faculty by Gender and TermFor All Three Colleges

		Mean	Courses	Faculty
2001 Fall	Female	4.25	225.00	N=53
	Male	3.74	1249.00	N=334
2002 Spring	Female	3.27	180.00	N=55
-1 5	Male	3.15	1058.00	N=336
2002 Fall	Female	4.35	239.00	N=55
	Male	3.66	1296.00	N=354
2003 Spring	Female	3.53	201.00	N=57
-1 5	Male	3.81	1366.00	N=359
2003 Fall	Female	3.33	200.00	N=60
	Male	3.28	1218.00	N=371
2004 Spring	Female	3.08	182.00	N=59
-1 5	Male	3.27	1215.00	N=372
2004 Fall	Female	3.31	202.00	N=61
i un	Male	3.17	1221.00	N=385
2005 Spring	Female	3.13	194.00	N=62
313	Male	3.31	1281.00	N=387



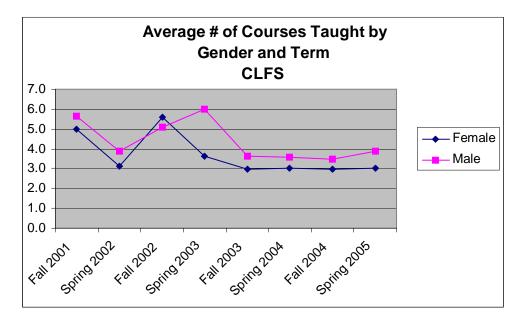


Table 4a

Average # of Courses by Taught Gender and Term CLFS

				71.0
		Mean	Courses	Faculty
2001 Fall	Female	5.00	115.00	N=23
	Male	5.63	321.00	N=57
2002 Spring	Female	3.13	75.00	N=24
-1 5	Male	3.93	228.00	N=58
2002 Fall	Female	5.61	129.00	N=23
	Male	5.10	311.00	N=61
2003 Spring	Female	3.63	87.00	N=24
-1 5	Male	5.98	365.00	N=61
2003 Fall	Female	2.96	77.00	N=26
	Male	3.65	237.00	N=65
2004 Spring	Female	3.00	78.00	N=26
	Male	3.60	234.00	N=65
2004 Fall	Female	2.96	77.00	N=26
i un	Male	3.45	245.00	N=71
2005 Spring	Female	3.00	78.00	N=26
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -	Male	3.92	278.00	N=71

Figure 3b

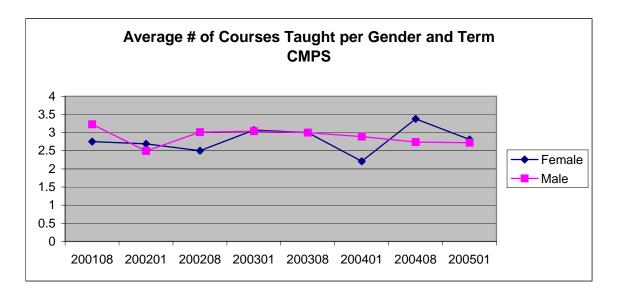
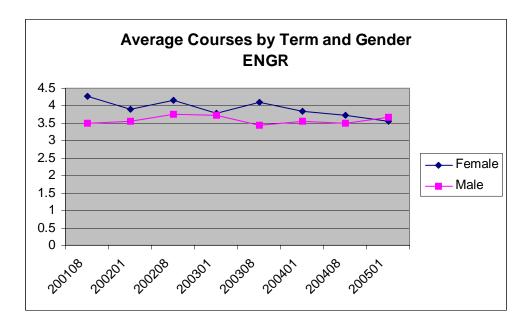


Table 4b

Average Courses by Gender and Term CMPS

		CIVIF 3					
		Mean	Courses	Faculty			
2001 Fall	Female	2.75	33.00	N=12			
Male	Male	3.23	478.00	N=148			
2002 Spring	Female	2.69	35.00	N=13			
1 0	Male	2.49	368.00	N=148			
2002 Female Fall	Female	2.50	35.00	N=14			
	Male	3.01	470.00	N=156			
2003 Spring	Female	3.07	46.00	N=15			
1 0	Male	3.04	477.00	N=157			
2003 Fall	Female	3.00	45.00	N=15			
	Male	3.00	492.00	N=164			
2004 Spring	Female	2.21	31.00	N=14			
	Male	2.89	471.00	N=163			
2004 Fall	Female	3.38	54.00	N=16			
	Male	2.74	450.00	N=164			
2005 Spring	Female	2.81	45.00	N=16			
	Male	2.72	454.00	N=167			

Figure 3c



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Average # of Courses by Gender and Term ENGR

		ENGK				
		Mean	Sum	Valid N		
2001 Fall	Female	4.28	77.00	N=18		
	Male	3.49	450.00	N=129		
2002 Spring	Female	3.89	70.00	N=18		
	Male	3.55	462.00	N=130		
2002 Fall	Female	4.17	75.00	N=18		
	Male	3.76	515.00	N=137		
2003 Spring	Female	3.78	68.00	N=18		
-1 5	Male	3.72	524.00	N=141		
2003 Fall	Female	4.11	78.00	N=19		
	Male	3.44	489.00	N=142		
2004 Spring	Female	3.84	73.00	N=19		
-1 5	Male	3.54	510.00	N=144		
2004 Fall	Female	3.74	71.00	N=19		
	Male	3.51	526.00	N=150		
2005 Spring	Female	3.55	71.00	N=20		
9	Male	3.68	549.00	N=149		

Table 5 a Percentage of total courses taught by gender and level CLFS

			CLF3				
	Female	Male	Total				
Count	186	784	970				
Column %	23.5	30.5	28.8				
Count	220	729	949				
Column %	27.8	28.3	28.2				
Count	103	290	393				
Column %	13.0	11.3	11.7				
Count	53	163	216				
Column %	6.7	6.3	6.4				
Count	229	606	835				
Column %	29.0	23.6	24.8				
Count	791	2572	3363				
Column %	100.0	100.0	100.0				
	Column % Count Column % Count Column % Count Column % Count Column %	Count 186 Column % 23.5 Count 220 Column % 27.8 Count 103 Column % 13.0 Count 53 Column % 6.7 Count 229 Column % 29.0 Count 791	Female Male Count 186 784 Column % 23.5 30.5 Count 220 729 Column % 27.8 28.3 Count 103 290 Column % 13.0 11.3 Count 53 163 Column % 6.7 6.3 Column % 29.0 23.6 Count 791 2572				

Table 5b

Percentage of Total Courses Taught by level and gender CMPS

			CMIS				
		Female	Male	Total			
100-299	Count	56	862	918			
	Column %	17.3	23.6	23.0			
300-499	Count	85	868	953			
	Column %	26.2	23.7	23.9			
500-699	Count	43	422	465			
	Column %	13.3	11.5	11.7			
500-699	Count	50	569	619			
	Column %	15.4	15.5	15.5			
899	Count	90	939	1029			
	Column %	27.8	25.7	25.8			
Total	Count	324	3660	3984			
	Column %	100.0	100.0	100.0			

Table 5c

Percentage of Total Courses Taught by level and gender ENGR

			-	ENGK				
		Female	Male	Total				
100-299	Count	82	346	428				
	Column %	14.1	8.6	9.3				
300-499	Count	166	1184	1350				
	Column %	28.6	29.4	29.3				
500-699	Count	116	752	868				
	Column %	20.0	18.7	18.9				
500-699	Count	93	717	810				
	Column %	16.0	17.8	17.6				
899	Count	124	1022	1146				
	Column %	21.3	25.4	24.9				
Total	Count	581	4021	4602				
	Column %	100.0	100.0	100.0				

The data come from the following sources: PHR employee data (UM_EMPLOYEE_VIEW) Term Division (defines College) Gender University ID (UM_ID) Primary Appointment Indicator **Appointment Rank Total FTE OIS_WKLD_EMPLOYEE** Workload Category (defines teaching faculty) **Teaching Expectation** Actual Teaching Load (Teaching Actual Individual and Teaching Actual Non individual) **Exception Need Indicator Exception Need Adjusted Indicator** Actual exception Workload Sabbatical Term Scheduling data (SCH_CRS_FAC) Course Section Individualized Instruction Indicator Student Count in Course **Course Number** Data were examined by headcount faculty and not FTE. Colleges was selected using DIVISION CODE = 36,30, and 32 for CLFS, CMPS, and ENGR, respectively

Appendix B

University wide

CLFS, CMPS, ENGR combined

	gender			gender					
	female		female male			female		male	
	ТОТ	TAL_SALARY9	тот	TAL_SALARY9		Total_SALARY9		Total_SALARY9	
	N	Mean	N	Mean		N	Mean	N	Mean
A11	343	84862.40	890	99736.39		62	92301.13	384	103432.48
APPT_RANK									
Assist Prof	94	68501.55	151	81084.79		13	77704.03	57	78278.32
Assoc Prof	129	76348.67	277	81760.73		22	84408.8	101	86558.81
Professor	120	106830.65	462	116610.09		27	105760.2	226	117317.57

Exhibit 2 Average (over 3 years) Refereed Publications by college

	gender				
	female AVEREF		male		
			AVEREF		
	N	Mean	N	Mean	
DIVISION_SD					
CLFS	25	2.56	73	3.16	
CMPS	17	5.17	157	4.17	
ENGR	19	5.31	139	5.91	
All 3	61	4.14	369		
University-wide	318	3 2.31	847	2.91	

A11

		gender				
	fer	female		ale		
	AVE	AVEREF		REF		
	N	Mean	N	Mean		
DIVISION_SD						
CLFS	5	1.30	11	2.42		
CMPS	2	0.83	14	5.43		
ENGR	6	6.92	21	5.32		
All 3	13	3.82	46	4.66		
University wide	79	1.72	124	2.58		

APPT_RANK Assist Prof

Exhibit 2 Average (over 3 years) Refereed Publications by college

Exhibit 2 Average (over 3 years) Refereed Publications by college

APPT_RANK Assoc Prof

		gender				
	fen	female AVEREF		ale		
	AVE			 REF		
	N	Mean	N	Mean		
DIVISION_SD				 		
CLFS	8	2.10	27	2.83		
CMPS	5	5.57	31	3.84		
ENGR	8	4.88	43	4.99		
A11 3	21	3.98	3 101	4.06		
Jniversity wide	124	2.16	270	2.37		

Exhibit 2 Average (over 3 years) Refereed Publications by college

APPT_RANK Professor

		gender				
	fer	female		ale		
		AVEREF		EREF		
	N	Mean	N	Mean		
DIVISION_SD						
CLFS	12	3.39	35	3.66		
CMPS	 10	5.83	112	4.11		
ENGR	5	4.07	75	6.60		
All 3	27	4.42	222	4.88		
University wide	115	2.88	453	3.31		

A11

	gender				
	female AVEGRANT N Mean		male		
			AVEGRANT		
			N	Mean	
DIVISION_SD					
CLFS	 25 	 198.32 	74	 146.95	
CMPS	17	264.04	159	270.88	
ENGR	19	150.02	139	293.92	
All 3	 61	201.59	372	254.83	

University-wide

328 88.80 857 146.54

APPT_RANK Assist Prof

		gender				
	fei	female		ale		
	AVE	AVEGRANT		AVEGRANT		
	N	Mean	N	Mean		
DIVISION_SD						
CLFS	5	209.13	12	 82.71		
CMPS	2	261.97	16	 175.65		
ENGR	6	204.48	21	82.92		
All 3	13	215.11	49	 113.15		
lnivonoity wido		45 04	100	69 10		

University wide

86 45.84 128 68.10

APPT_RANK Assoc Prof

gender				
female		male		
AVEGRANT		AVEGRANT		
N 	Mean	N	Mean	
 8 	 175.93 	27	 140.88 	
5 	483.79	31	210.22	
8	179.91	43	213.53	
21	250.75	101	193.09	
	AVE(N 8 5 8	female AVEGRANT N Mean 8 175.93 5 483.79 8 179.91	female ma AVEGRANT AVE(N Mean N 8 175.93 27 5 483.79 31	

University wide

126 90.25 274 93.64

APPT_RANK Professor

	gender				
	female		male		
	AVEGRANT		AVEGRANT		
	N	Mean	N	Mean	
DIVISION_SD					
CLFS	 12 	208.75	35	173.65	
CMPS	10 	154.58	112	301.27	
ENGR	5 	36.83	75	399.09	
All 3	 27	156.85	222	314.20	

University-wide

116 119.07 455 200.47

A11

	gender			
	female		male	
	AVEPRES		AVEPRES	
	N	Mean	N	Mean
DIVISION_SD				
CLFS	 25	4.57	73	3.39
CMPS	17	4.11	157	3.19
ENGR	19	3.71	139	3.43
All 3	61	4.17	369	3.32
University-wide	318	3.09	847	2.94

APPT_RANK Assist Prof

	gender			
	female		male	
	AVEPRES		AVEPRES	
	N	Mean	N	Mean
DIVISION_SD				
CLFS	 5 	2.10	11	1.36
CMPS	2	0.67	14	2.37
ENGR	6	2.42	21	2.62
All 3	13	2.03	46	2.24
University wide	79	2.31	124	2.34

APPT_RANK Assoc Prof

	gender			
	female		male	
	AVEPRES		AVEPRES	
	N	Mean	N	Mean
DIVISION_SD				
CLFS	1 8 	3.65	27	3.32
CMPS	5	4.20	31	2.44
ENGR	8	5.71	43	3.74
A11	21	4.56	101	3.23
University wide	124	3.00	270	2.58

APPT_RANK Professor

	gender				
	fer	female		ale	
	AVE	AVEPRES		AVEPRES	
	N	Mean	N	Mean	
DIVISION_SD					
CLFS		6.22	35	4.09	
CMPS	10	4.75	112	3.50	
ENGR	5	2.07	75	3.48	
A11 	27	4.91	222	3.59	

University wide

115 3.72 453 3.32

A11

		gender			
	fer	female		ale	
	AVE	AVECREATE		AVECREATE	
	N	 Mean	N	Mean	
DIVISION_SD					
CLFS	25	 1.32	73	0.86	
CMPS	17	0.73	157	89.60	
ENGR	19	0.04	139	0.27	
A11	61	0.75	369	38.39	
University wide	318	1.35	847	17.59	

APPT_RANK Assist Prof

		gender			
1	fer	female		ale	
1	AVEC	AVECREATE		AVECREATE	
1	N	Mean	N	Mean	
DIVISION_SD					
CLFS	5	0.00	11	0.15	
CMPS	2	0.00	14	0.21	
ENGR	6	0.00	21	0.16	
All	13	0.00	46	0.17	
University wide	79	0.40	124	0.56	

APPT_RANK Assoc Prof

	gender				
	female		male		
	AVECREATE		AVECREATE		
	N	Mean	N	Mean	
DIVISION_SD					
CLFS	 8 	3.50	27	0.10	
CMPS	 5 	0.07	31	2.27	
ENGR	8	0.08	43	0.53	
A11	21	1.38	101	0.95	
University wide	124	1.59	270	1.99	

APPT_RANK Professor

	gender				
	female		male		
	AVECREATE		AVECREATE		
	N	Mean	N	Mean	
DIVISION_SD					
CLFS	1 12	0.42	35	1.66	
CMPS	10	1.20	112	124.95	
ENGR	5	0.00	75	0.16	
A11	27	0.63	222	63.35	

University wide

115 1.76 453 31.55

A11

Γ	·····					
1		gender				
		female		male		
	A	AVEBOOKS		AVEBOOKS		
	N		 Mean	N	Mean	
DIVISION_SD						
CLFS		25	0.05	73	0.10	
CMPS		17	0.17	157	0.17	
ENGR		19	0.07	139	0.38	
A11		61	0.09	369	0.24	
University wide	0	10	0 19	0.47	0.04	

University wide

318 0.18 847 0.24

APPT_RANK Assist Prof

	gender			
	female AVEBOOKS		male AVEBOOKS	
	N	Mean	N	Mean
DIVISION_SD				
CLFS	5 	0.00	11	0.09
CMPS	2	0.17	14	0.14
ENGR	6	0.00	21	0.06
All	13 	0.03	46	0.09
University wide	79	0.07	124	0.13

APPT_RANK Assoc Prof

		gender			
	f	female AVEBOOKS		male AVEBOOKS	
	AV				
	N	Mean	N	 Mean	
DIVISION_SD					
CLFS		3 0.00	 0 27	 0.02	
CMPS		5 0.1:	3 31	0.18	
ENGR		B 0.1:	3 43	0.16	
 All	2	1 0.0	B 101	0.13	
Jniversity wide	124	4 0.19	9 270	0.13	

APPT_RANK Professor

	gender			
	female AVEBOOKS		male AVEBOOKS	
	N	Mean	N	Mean
DIVISION_SD				
CLFS	12	0.11	35	0.15
CMPS	10	0.18	112	0.17
ENGR	5	0.07	75	0.60
A11	27	0.13	222	0.31
University wide	115	0.26	453	0.33

Exhibit 3 1 Full model (PRODUCTIVITY VARIABLES ARE IN) Limited pool (administrators are out)

The REG Procedure Model: MODEL1 Dependent Variable: TOTAL_SALARY9 TOTAL_SALARY9

Analysis of Variance							
		Sum of	Mean				
Source	DF	Squares	Square	F Value	Pr > F		
Model	12	1.58954E11	13246166572	28.70	<.0001		
Error	417	1.924523E11	461516399				
Corrected Total	429	3.514063E11					
Root MSE	21483	R-Square	0.4523				
Dependent Mean	102191	Adj R-Sq	0.4366				
Coeff Var	21.02238						

Parameter Estimates

Variable Pr > t	Label	DF	Parameter Estimate	Standard Error	t Value
Intercept <.0001	Intercept	1	67608	3804.30501	17.77
PROF <.0001	professor	1	24131	3894.66829	6.20
PERMASSC 0.1149	assoc prof 10 yrs plus	1	16897	10696	1.58
STRVASSC 0.1874	assoc prof under 10 yrs	1	6585.02747	4986.83556	1.32
kGENDER 0.2167	gender, O=female, 1=male	1	3775.51050	3051.82319	1.24
YRSPROF <.0001	yrs as prof	1	678.65731	163.90003	4.14
YRSPERM 0.2208	yrs as perm assoc	1	-622.33949	507.48621	-1.23
YRSSTRV 0.8446	yrs as striving assoc	1	182.31809	929.72671	0.20
AVEGRANT <.0001	grant \$ (in \$1000)	1	8.42542	1.66656	5.06
AVEREF <.0001	refereed pub	1	1520.31476	261.00652	5.82
AVEPRES 0.5918	presentations	1	179.18321	333.87901	0.54
AVECREATE 0.1721	creative activities	1	2.11578	1.54676	1.37
AVEBOOKS 0.0099	books	1	2152.50056	830.99799	2.59