A Briefing Report on the Climate for Women
in the
College of Natural Science and the College of Engineering
at the
University of Texas at Austin

In preparation for

"The Climate for Women in Science: M.I.T. Report and Panel Discussion"
(Scheduled for September 22, 1999)

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TABLE OF CONTENTS page

1. Introduction

The first Universities were founded in the eleventh and twelfth centuries and, from the beginning, most of these early Universities excluded women both as students and as faculty. These exclusionary policies continued until the end of the nineteenth century, and indeed, at some institutions they still exist.

Eight hundred years of exclusionary practices continue to have an effect on the attitudes towards women and climate for women in modern Universities, especially in the sciences. Some of these effects were documented in a recent study of the status and climate for women at M.I.T. A study of the six departments in the School of Science at M.I.T.[1] reports the following:

"The Committee discovered that junior women faculty feel well supported within their departments and most do not believe that gender bias will impact their careers. Junior women faculty believe, however, that family-work conflicts may impact their careers differently from those of the their male colleagues. In contrast to junior women, many tenured women faculty feel marginalized and excluded from a significant role in their departments. Marginalization increases as women progress through their careers at M.I.T.. Examination of data revealed that marginalization was often accompanied by differences in salary, space, awards, resources, and response to outside offers between men and women faculty with women receiving less despite professional accomplishments equal to those of their male colleagues. An important finding was that this pattern repeats itself in successive generations of women faculty. The Committee found that, as of 1994, the percent of women faculty in the School of Science (8%) had not changed significantly for at least 10 and probably 20 years."

The present report is a summary of data gathered to determine if similar conditions exist in the U.T. College of Natural Science and the U.T. College of Engineering, as regards the status of women in their science and engineering departments. As a preliminary indication that there are analogies between U.T. and M.I.T., in Figure 1 we plot the total numbers of male and female faculty in the U.T. College of Natural Science (CNS) for each year from 1986 to 1998. In that same graph, we include analogous data for the M.I.T. School of Science for the year 1994. One can see that the U.T. College of Natural Science (7.7% women faculty) is quite similar to the M.I.T. School of Science (8.0% women faculty). In Table 1 we give the total number of male and female faculty in the U.T College of Natural Science and in Table 2 we give similar data for the U.T. College of Engineering.

The low rate of participation of women in the sciences in the U.S. is a problem of national concern and a problem for Texas. It is informative to reproduce here excerpts from a 1996 mission statement by the U.S. National Science Foundation:[2] *The role of science and technology in American society is undergoing dramatic change. In an*

[1] . This report can be found on the WEB at http://web.mit.edu/fnl

[2] . The National Science Foundation, Directorate for Education and Human Resources, Division of Human Resources Development, Program for Women and Girls in Science, Engineering, and Mathematics, 1996 (NSF 96-131).

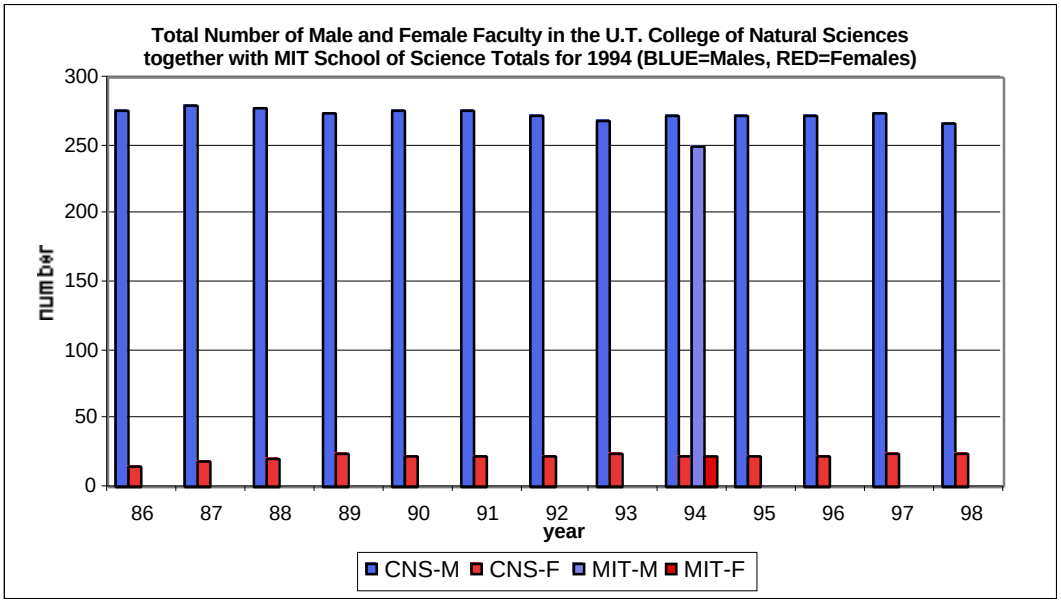


Figure 1. The total numbers of male and female faculty in the U.T. College of Natural Science for each year from 1986 to 1998. (U.T. faculty data does not include data from the Department of Human Ecology.) The total number of male and female faculty in the M.I.T. School of Science is also shown for the year 1994.

CNS	Faculty	numbers											
year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Male	276	279	277	273	275	275	271	268	272	272	271	274	266
Female	15	18	20	24	23	23	23	24	23	22	22	25	24

Table 1. The total numbers of male and female faculty in the U.T. College of Natural Science for each year from 1986 to 1998. (Faculty data from the Department of Human Ecology not included.)

ENG	Faculty	numbers											
year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Male	199	204	211	220	225	231	227	230	224	225	218	218	216
Female	6	7	6	8	10	10	11	11	13	14	18	18	20

Table 2. The total numbers of male and female faculty in the U.T. College of Engineering for each year from 1986 to 1998. (Faculty data from the Department of Biomedical Engineering not included.)

increasingly technology-oriented society, a basic understanding of science and mathematics is essential to maintain a population prepared to meet the need for a technically competent work force and to exercise the responsibilities of citizenship in a modern democracy. The U.S. Bureau of Labor Statistics projects that, while overall rates of entry into the labor force will decrease between 1994 and 2005, the women's labor force will be growing twice as quickly as the labor force for men. By 2005, nearly two-thirds of all women will be working and they will make up nearly half of the total labor

force. Moreover, the jobs facing these new workers will require higher skill levels in science, engineering, and mathematics than ever before. More effective education and human resource initiatives are needed if America is to maintain its technological leadership in the world marketplace. The low participation level of women in science, engineering, and math (SEM) is a serious national problem. Several issues of particular concern are:

- *the disproportionately high numbers of girls who lose interest in science during elementary and middle school;*
- *the low numbers of women who enroll in advanced high school science and math courses to prepare for college;*
- *the disproportionately low numbers of women entering undergraduate studies in SEM, particularly in the physical sciences, computer sciences, and engineering;*
- *the low number of women completing SEM graduate degrees; and*
- *the slow rate of women's advancement to senior ranks and leadership positions in academic, industry, business, and government careers.*

Change is needed to reverse these trends. At the elementary and secondary levels, there must be significant changes in the ways science and math are taught to girls and young women, including changes in the formal and informal interactions that support and develop their interest, understanding, and skills in science and mathematics. At the undergraduate and graduate levels, there must be changes in the cultures of science, mathematics, and engineering departments to improve support for both the recruitment and retention of women and girls in SEM studies and careers."

The exclusion of women from participation in science has impacted science education at all levels in the United States. It of interest to look at the statistics for Physics. Physics is a core subject in science education. It provides training in logical thinking, it researches the laws which govern the physical world, it gives training in the modeling of real world phenomena, it provides the tools to study the dynamic evolution of complicated systems. In Figure 2 we show the percentage of women who hold faculty positions in Physics in some of the developed countries of the world. According to these statistics, American Physics appears to be one of the most exclusionary institutions in the developed world.

In the subsequent pages, we will look at several different data sets for the College of Natural Science and the College of Engineering which are indicative of the climate for women and the status of women in those Colleges. We selected data sets that were readily available from the Office of Institutional Studies at the University of Texas and which paralleled data sets used in the M.I.T. report. These data sets reflect the larger context of women's participation in science and engineering at U.T. Austin. Specifically, for each College (A) we will count the number of males and females who hold the positions of Chair, Professorship, Professor, Associate Professor, and Assistant Professor; (B) we will compare the average salary of males and females in these positions; (C) we will compare the percentage of male and female faculty to the percentage of male and female students in the various departments of the two colleges; and (D) we will compare the percentage of female faculty at the University of Texas to the available national pool of female Ph.D.s.

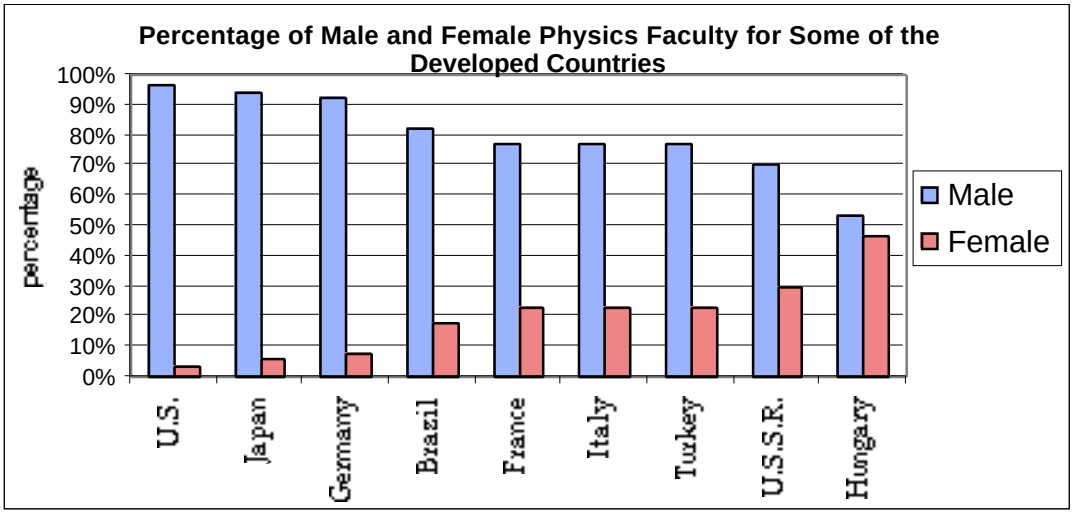


Figure 2. The percentage of males and females in Physics faculty positions by country[3].

In this report we will not attempt to interpret our results or go into the very complex ways in which they might adversely affect women at all age levels in the sciences. We will, however, make some concluding remarks.

Presentation and Data Analysis. Most of our plots are self-explanatory. However, we do need to discuss our analysis of salary data. We obtained salary data for each year from 1986 to 1998. For each Department, we had the average salary of males in each of the positions of Chair, Professorship, Professor, Associate Professor, and Assistant Professor. We had similar salary data for females in each of those positions for each Department. The percentages reported in Figures (2.1b)-2.5b) and (3.1b)-(3.5b) were found as follows. We took the average salary of males and of females in each of those positions, and computed their percentage of the average department salary. To be clear about what we have done we will do an example:

Assume that Department X has 10 male Associate Professors with an average salary of M_{av}=\$60,000, and 2 female Associate Professors with an average salary of F_{av}=\$50,000. The Department average salary for Associate Professors, D_{av}, is D_{av}=[10x\$60,000+2x\$50,000]/12=\$58,333. The percent of the Department average for male Associate Professors is M%=M_{av}/D_{av}=103%. The percent of the Department average for female Associate Professors is F%=F_{av}/D_{av}=86%.

Quantities equivalent to F% and M% are plotted in Figures (2.1b)-(2.10b) for the College of Natural Sciences and in Figures (3.1b)-(3.5b) for the College of Engineering.

In Section 2, we give data for the College of Natural Sciences. In Section 3, we give data for the College of Engineering. In Section 4, we make some concluding remarks. In the Appendices, we include data tables for all plots that appear in Sections 2 and 3.

[3] M.S. Dresselhaus, CSWP Gazette (APS), Vol. 14, #1, Spring 1994.

2. The College of Natural Sciences

The College of Natural Sciences consists of Departments which cover a broad range of disciplines. The Departments we have included in the present study are Astronomy, Botany, Chemistry/Biochemistry, Computer Science, Geology, Mathematics, Microbiology, Physics, and Zoology. We have not included the Department of Human Ecology because some of the disciplines in that Department are not typical for Natural Science Colleges. (The data for the Department of Human Ecology appears in Section 2.5.)

The plots on subsequent pages use abbreviations which represent departments or groupings of departments as follows: Ast= Astronomy, Bot=Botany, ChBch= Chemistry and Biochemistry, CompSc= Computer Science, GeoSc= Geology, Math= Mathematics, MicBio=Microbiology, Phys=Physics, and Zoo=Zoology. For example, Ast-M and Ast-F refer to male and female faculty, respectively, in the Astronomy Department.

In Section (2.1), we look at faculty number and faculty salary data. In Section (2.2) we compare male-female faculty percentages to male-female student percentages. In Section (2.3), we compare male-female faculty percentages to the male-female national Ph.D. pool percentages.

The national Ph.D. pool data was in such a form that we thought it best to combine the Departments of Botany, Microbiology, and Zoology when comparing the hiring of females in those departments with available pool of females, nationally. We compared percentage of male and female faculty in Botany, Microbiology, and Zoology with all pool data under the category of “Life Sciences”, except for biochemistry, biophysics, biometrics and biostatistics, and nutritional sciences, which we excluded in computing “Life Sciences” pool data. Pool data on biochemistry was combined with pool data on chemisty to better fit U.T. classifications. Also, pool data for the Geology Department was buried in a broader category called “Earth, Atmospheric, and Marine Science”. We took from that broad category the subtopics of Geology, Geochemisty, Geophysics and seismology, Mineralogy and Petrology, Stratigraphy and sedimentation, Geomorphology and Glacial Geology, Applied Geology, Geological Sciences General, and Geological Sciences Other, to obtain our Geology pool data.

2.1. CNS Faculty Number and Salary Data

On the following pages, we compare number and salary data for males and females holding the positions of Chair, Professorship, Professor, Associate Professor, and Assistant Professor in the departments of Astronomy, Botany, Biochemistry, Chemistry, Computer Science, Geology, Mathematics, Microbiology, Physics, and Zoology.

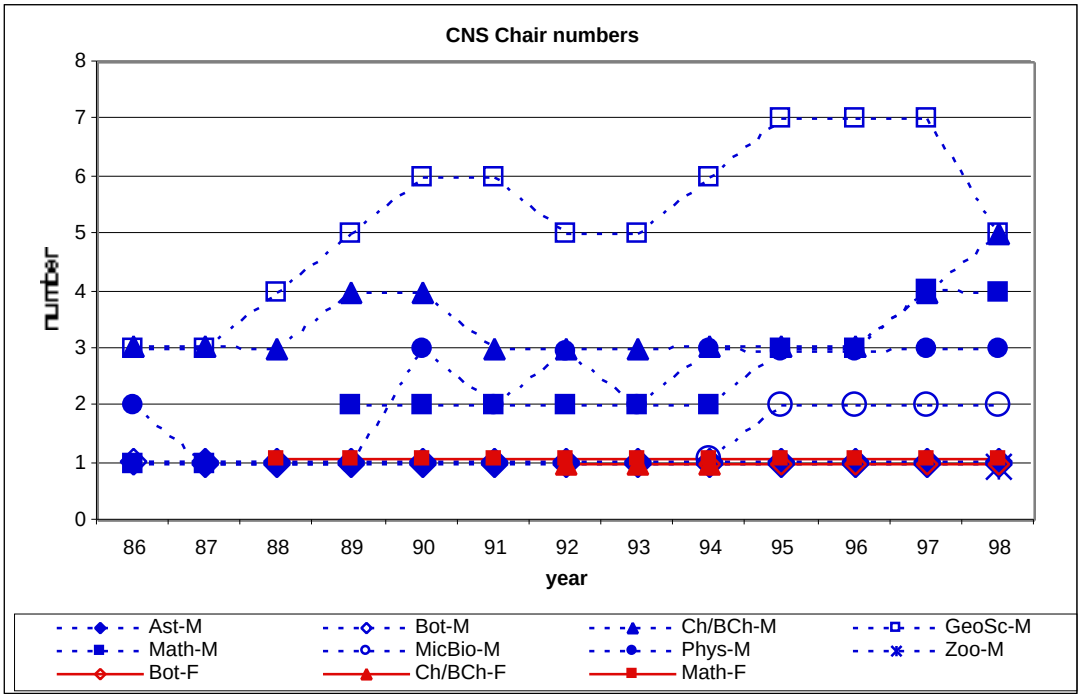


Figure (2.1a) Number of male and female CNS Chairs by department. If a department is not shown, it has no Chairs. (BLUE=males, RED=females)

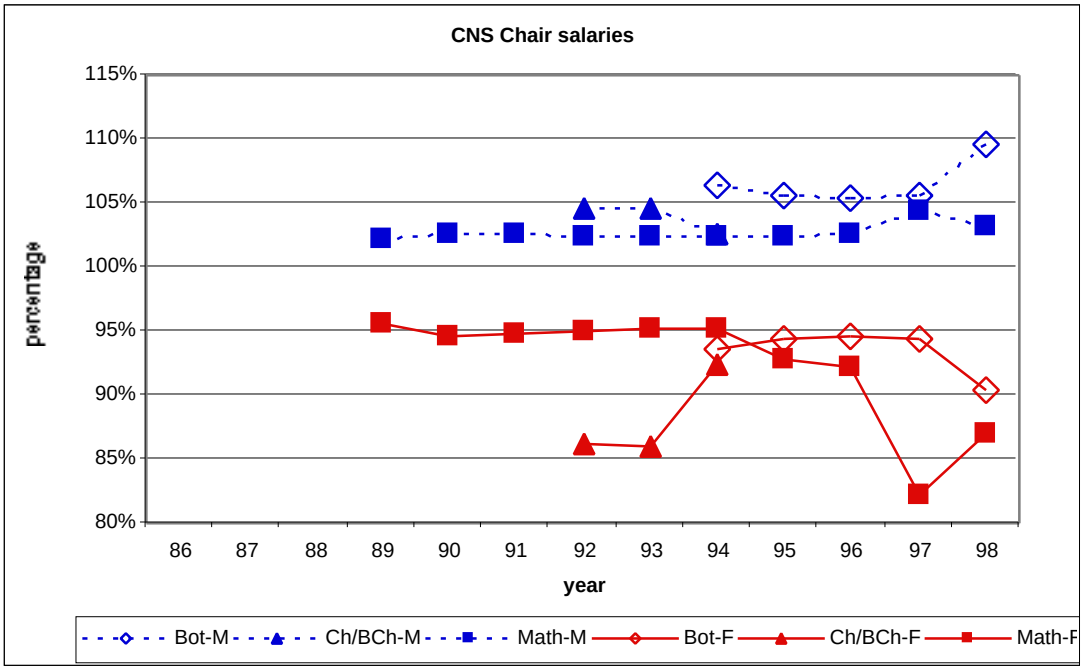


Figure (2.1b) Percent of department average salary for male and female CNS Chairs by department. If a department is not shown, it has no female Chairs. (BLUE=males, RED=females)

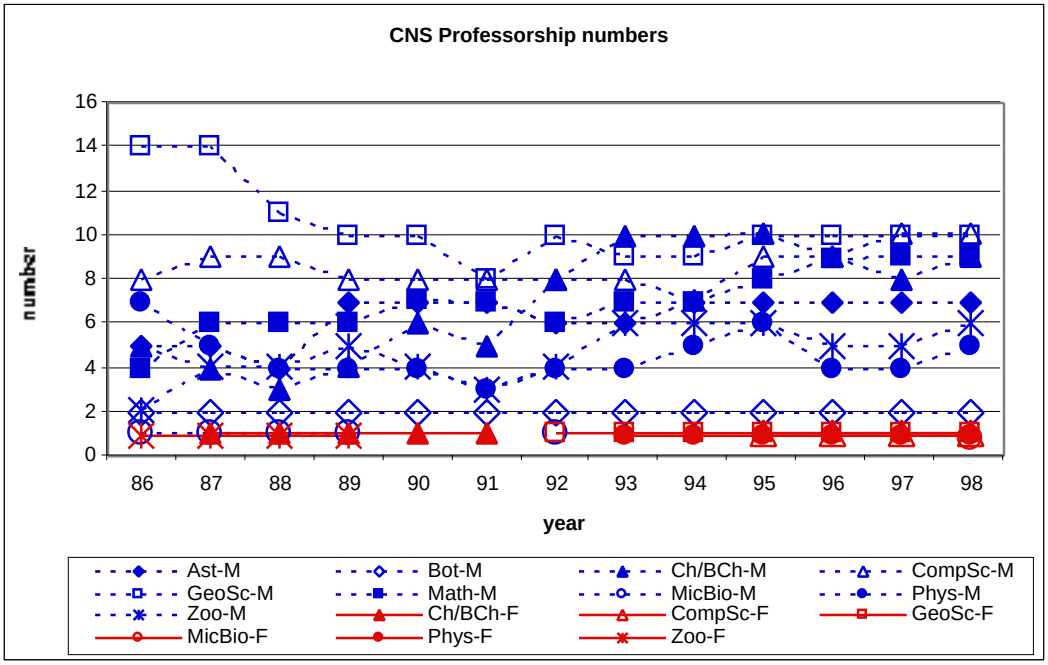


Figure (2.2a) Number of male and female CNS Professorships by department. If a department is not shown, it has no Professorships. (BLUE=males, RED=females)

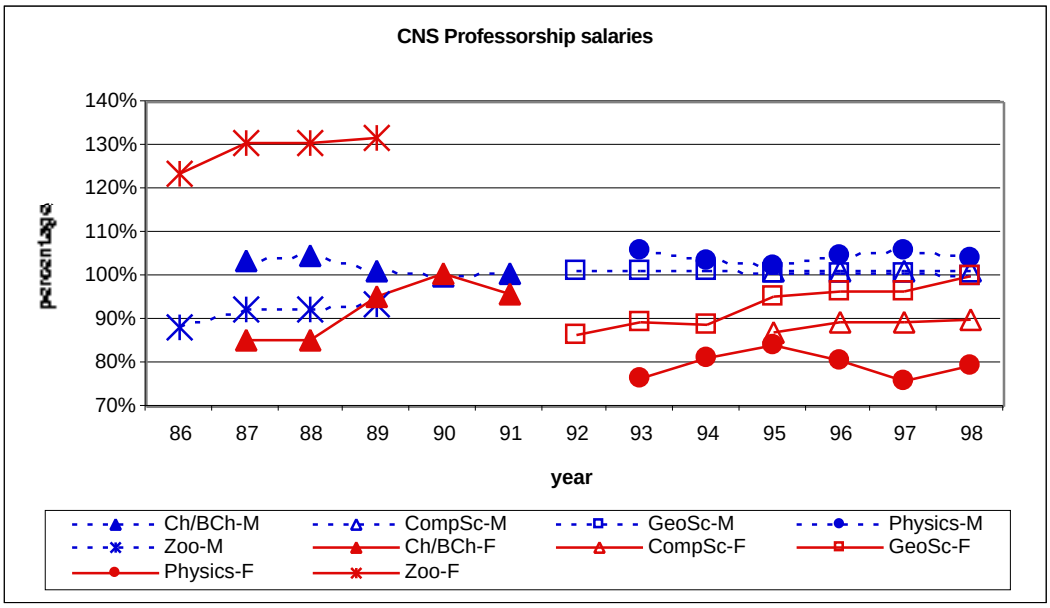


Figure (2.2b) Percent of department average salary for male and female CNS Professorships by department. If a department is not shown, it has no female Professorships. (BLUE=males, RED=females)

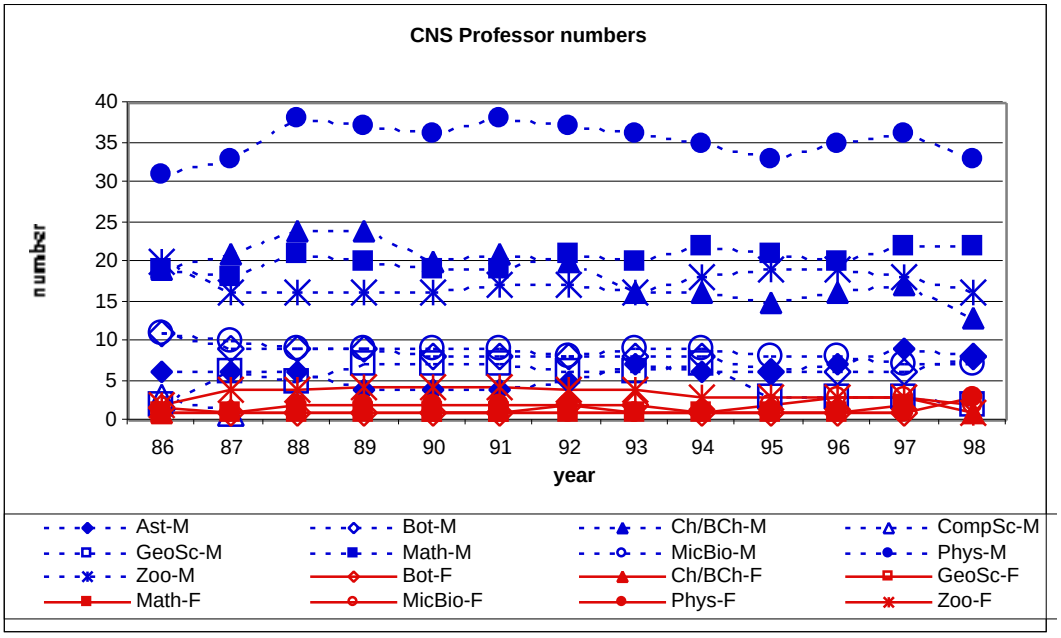


Figure (2.3a) Number of male and female CNS Professors by department. If a department is not shown, it has no Professors. (BLUE=males, RED=females)

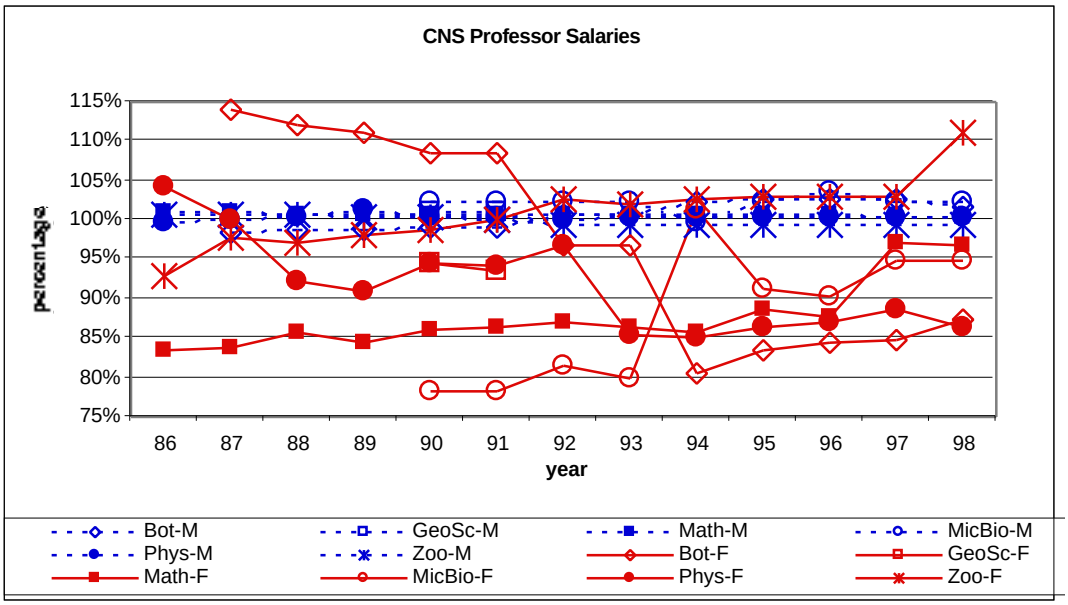


Figure (2.3b) Percent of department average salary for male and female CNS Professors by department. If a department is not shown, it has no female Professors. (BLUE=males, RED=females)

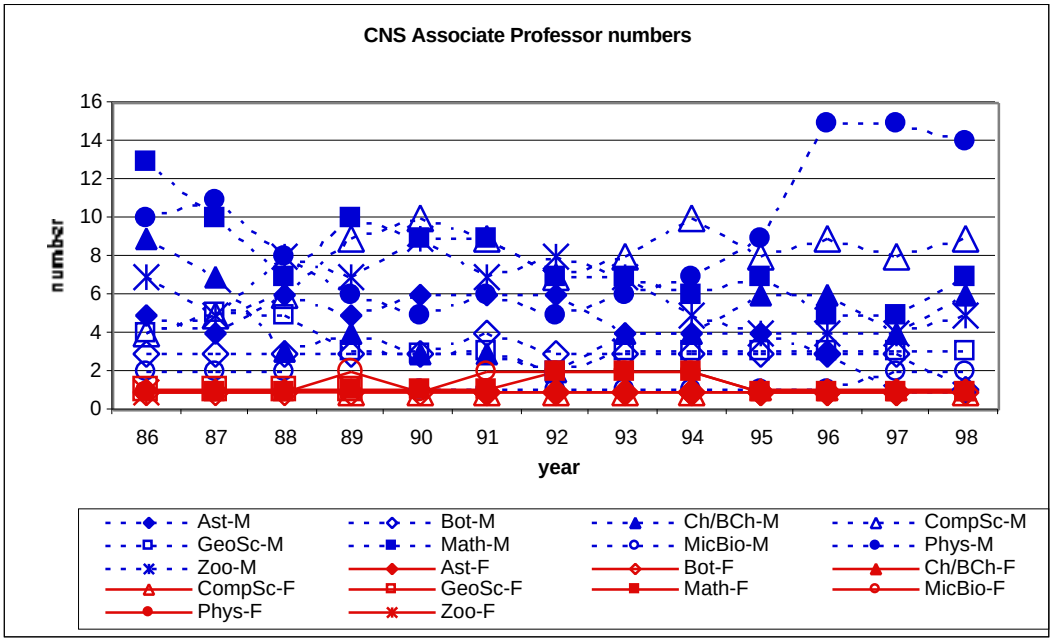


Figure (2.4a) Number of male and female CNS Associate Professors by department. If a department is not shown, it has no Associate Professors. (BLUE=males, RED=females)

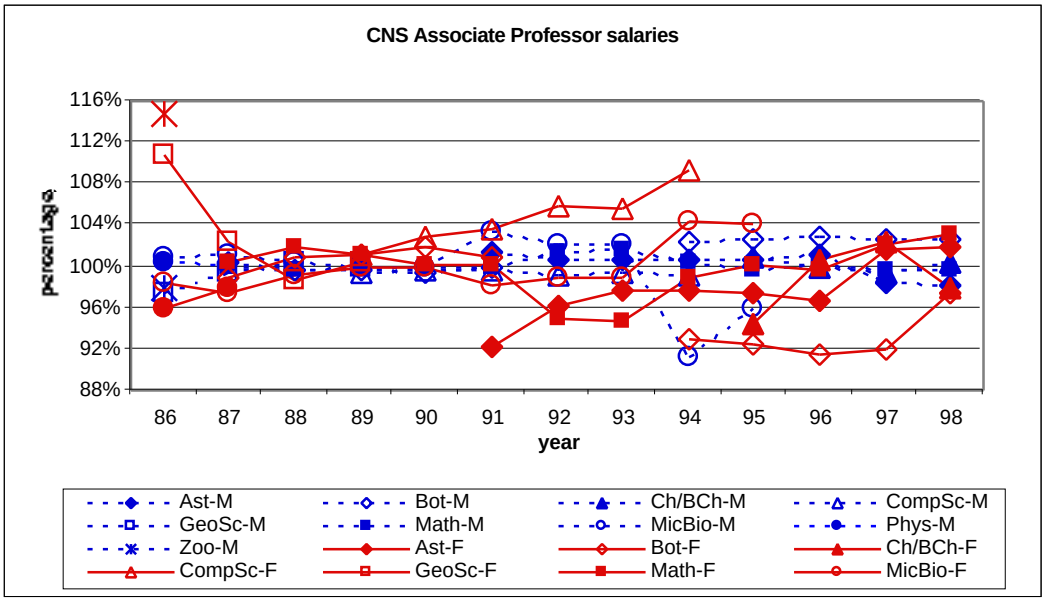


Figure (2.4b) Percent of department average salary for male and female CNS Associate Professors by department. If a department is not shown, it has no female Associate Professors. Note: the red star denotes Zoo-F. (BLUE=males, RED=females)

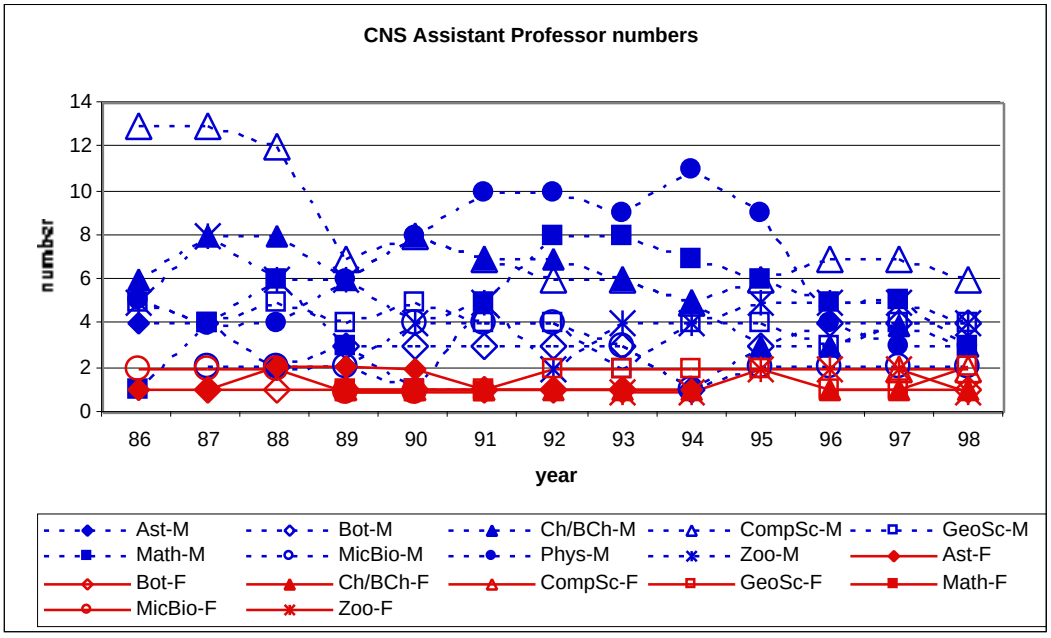


Figure (2.5a) Number of male and female CNS Assistant Professors by department. If a department is not shown, it has no Assistant Professors. (BLUE=males, RED=females)

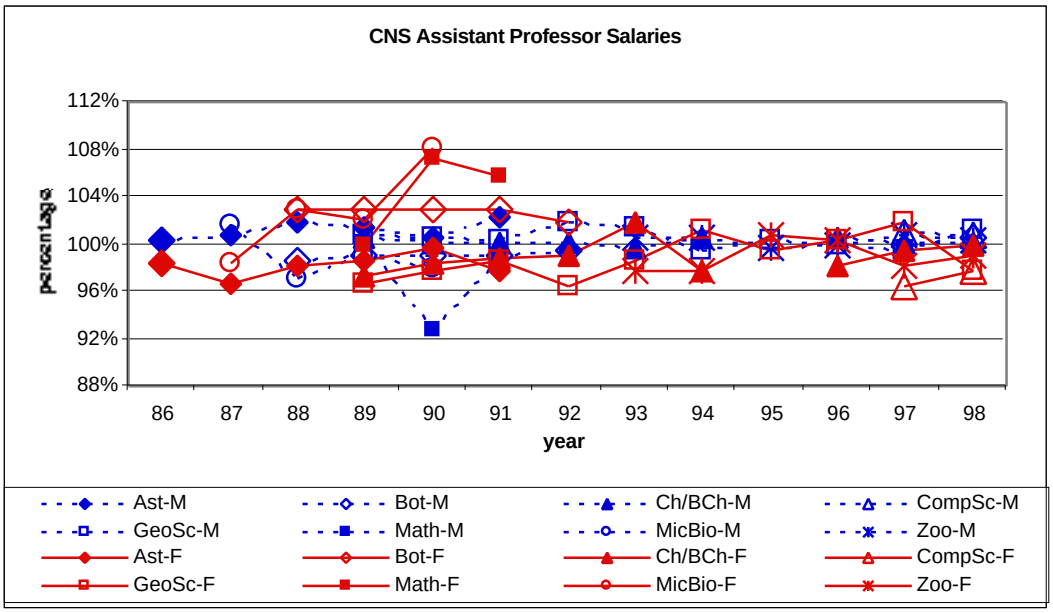


Figure (2.5b) Percent of department average salary for male and female CNS Assistant Professors by department. If a department is not shown, it has no female Assistant Professors. (BLUE=males, RED=females)

2.2. Male-Female Percentages for CNS Faculty and Students

The ratio of male to female faculty in a department relates to the climate for both men and women students. Excessively low numbers of women faculty in science

departments often indicate attitudes toward women and a climate for women that can be chilling[4]. It leaves young women with no role models, while young men have many role models. The young women receive many subtle messages that they are not as valuable as the young men. The young men absorb these attitudes and carry them on to future generations.

In this Section, we show the percentages of male and female faculty and students in the Departments of Astronomy, Botany, Biochemistry, Chemistry, Computer Science, Geology, Mathematics, Microbiology, Physics, and Zoology in the U.T. College of Natural Sciences. Comparison of these percentages indicates the ratios of male to female faculty in these departments.

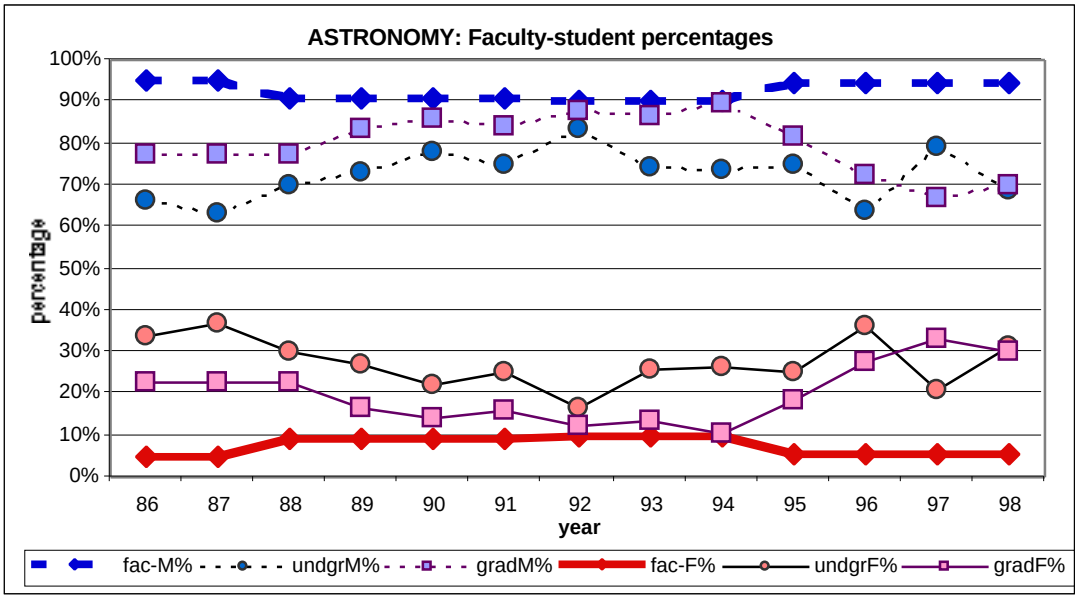


Figure (2.6) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Astronomy Department.

[4] R. Hall and B. Sandler, *The Classroom Climate: A Chilly One for Women?* Washington DC: Project on the Status and Education of Women, Association of American Colleges, 1982.

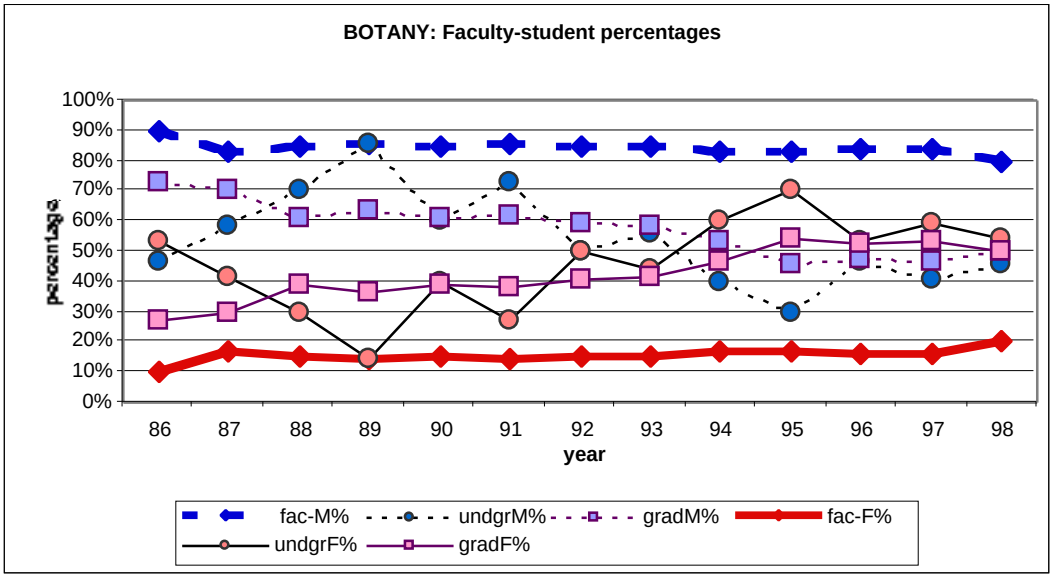


Figure (2.7) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Botany Department.

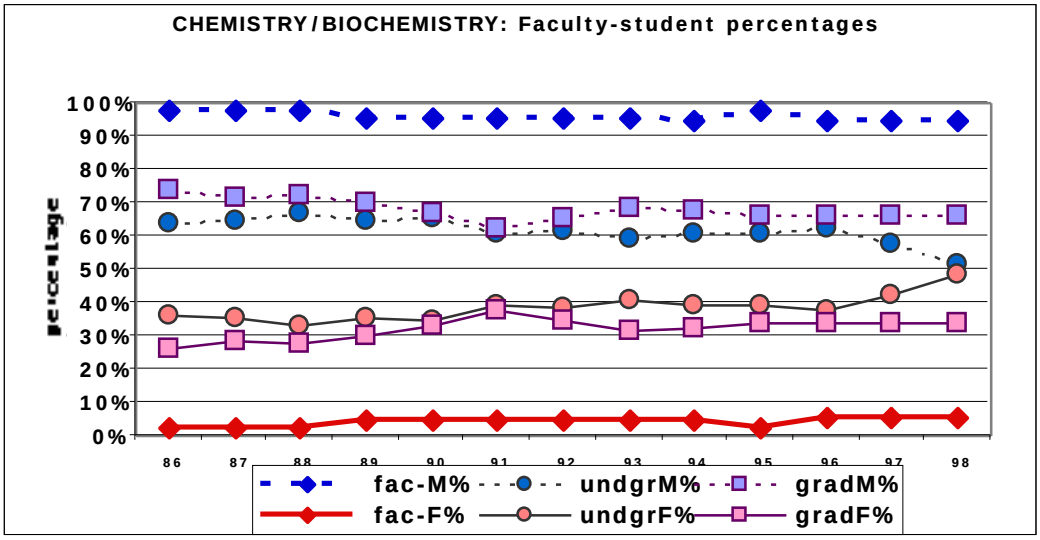


Figure (2.8) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Chemistry and Biochemistry Department.

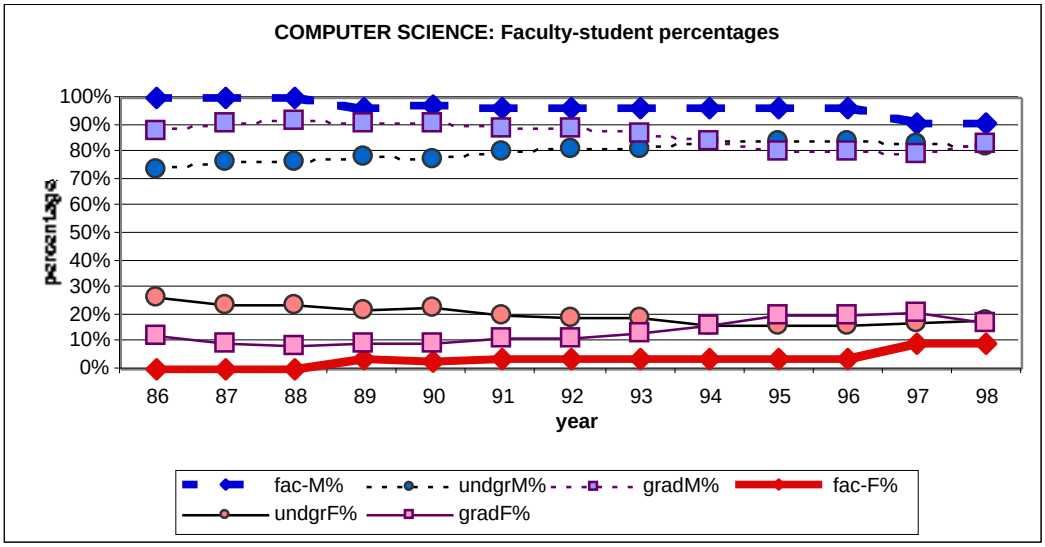


Figure (2.9) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Computer Science Department.

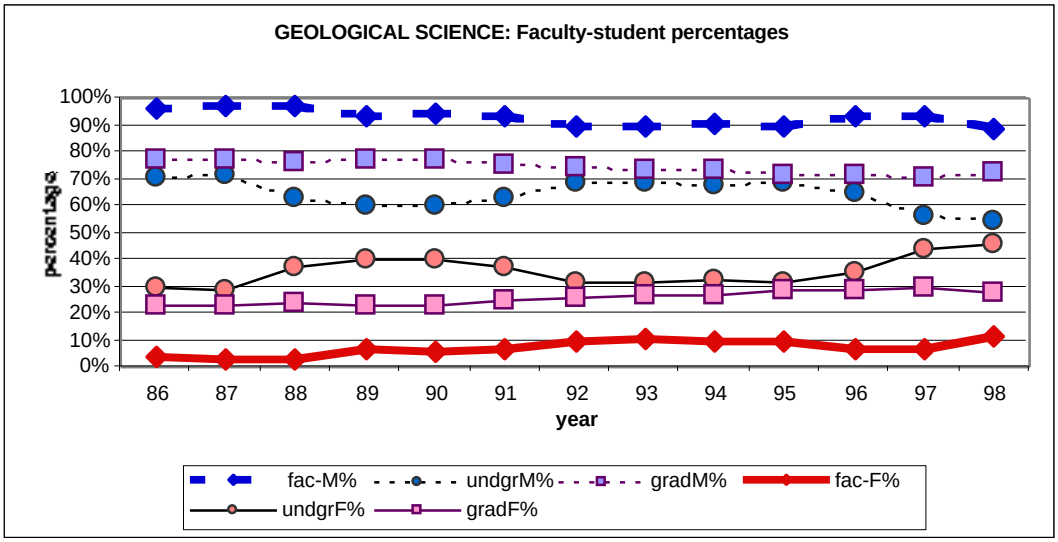


Figure (2.10) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Geological Science Department.

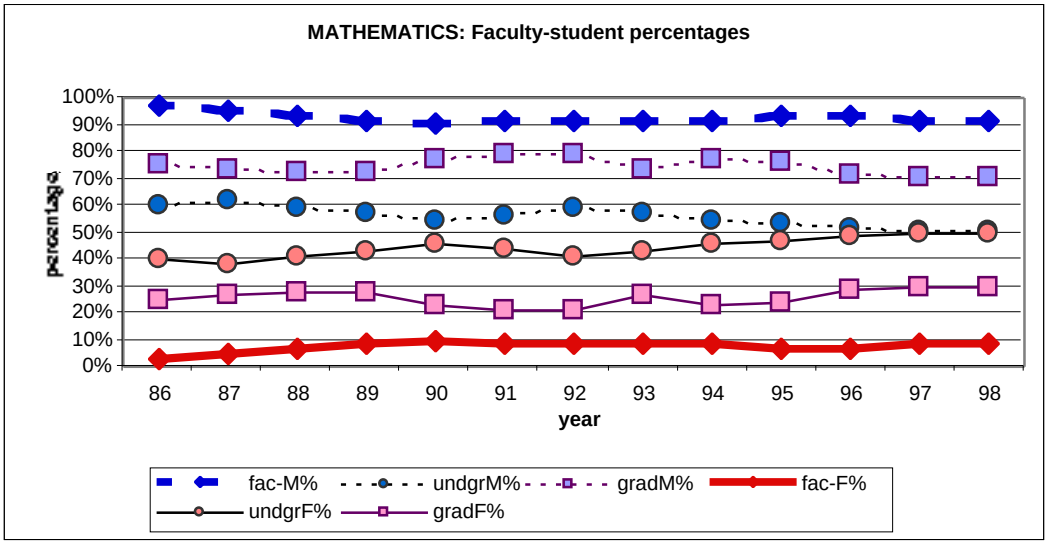


Figure (2.11) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Mathematics Department.

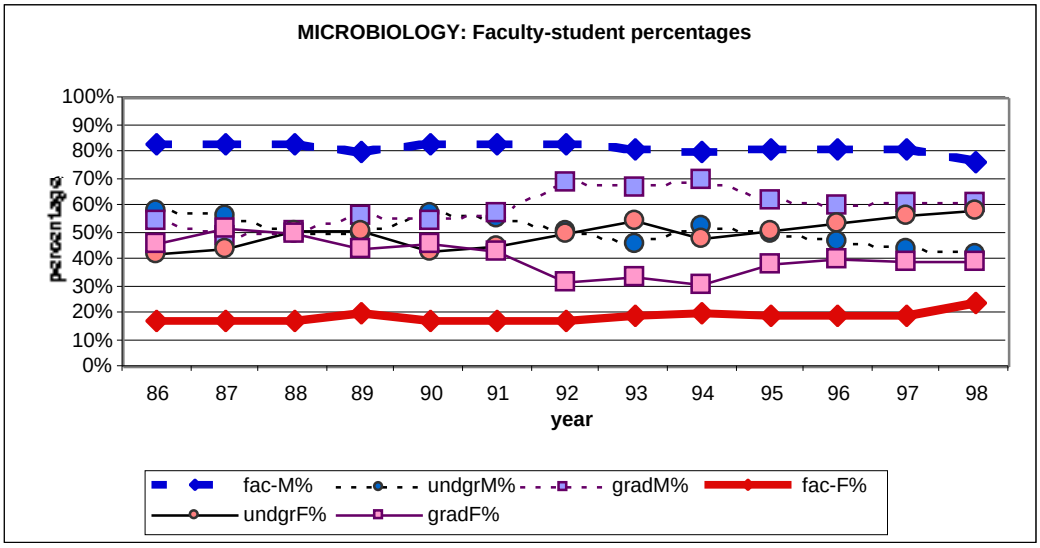


Figure (2.12) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Microbiology Department.

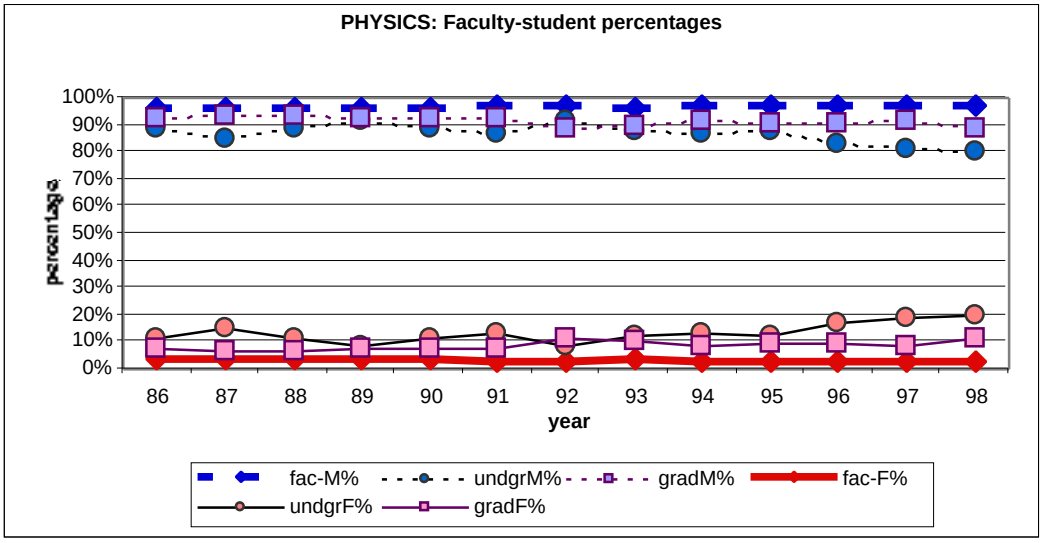


Figure (2.13) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Physics Department.

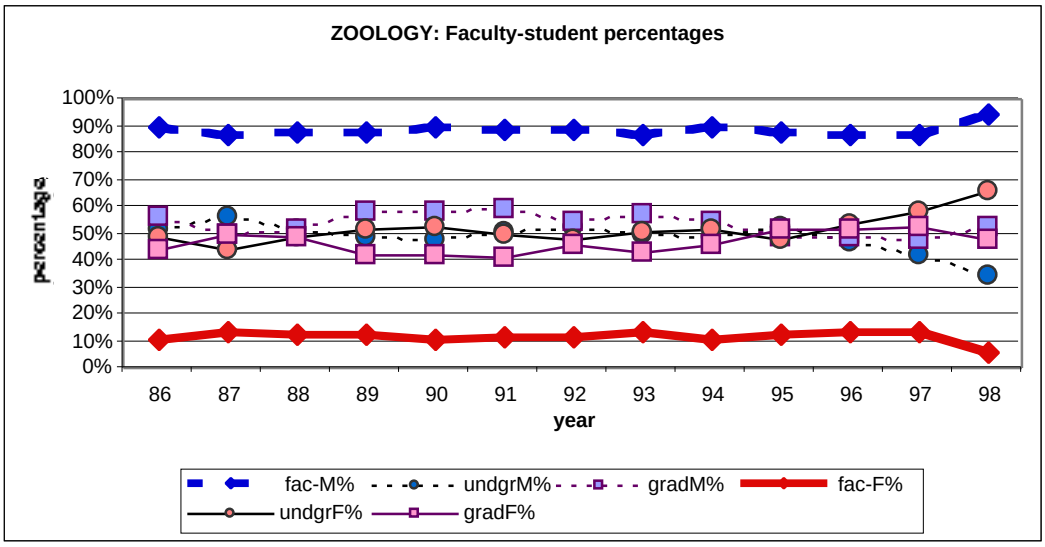
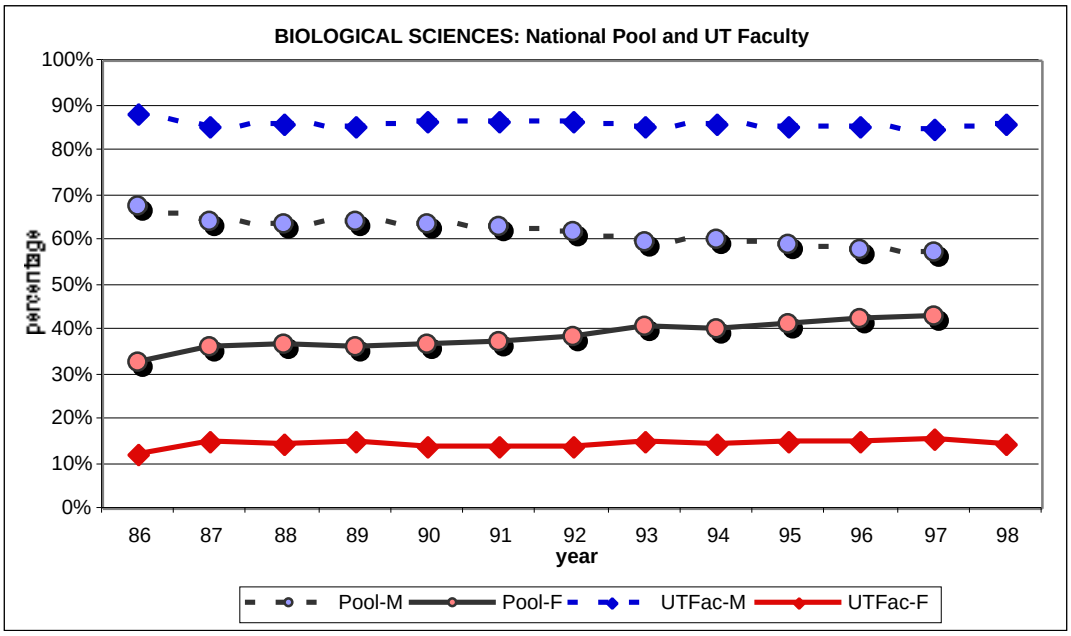


Figure (2.14) The percentage of male and female faculty, graduate students, and undergraduate students in the CNS Zoology Department.

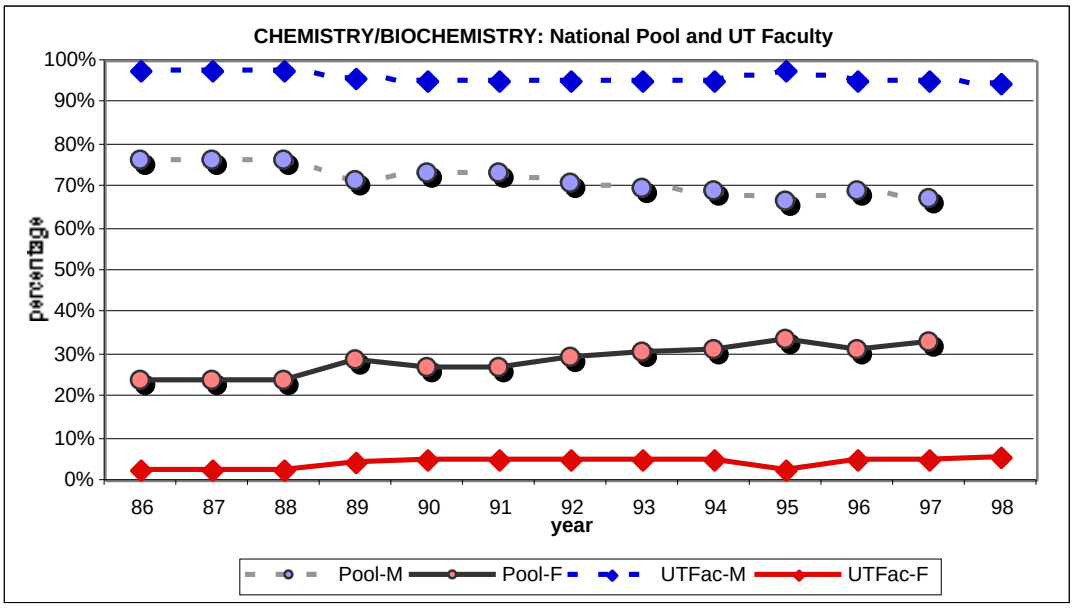
2.3. Male-Female Percentages for CNS Faculty and National Pool

In this Section, we compare the percentage of male and female faculty in each Department to the percent of male and female Ph.D. recipients in the fields relevant to



those Departments. These data can provide an indication of hiring practices at U.T.

Figure (2.15) The percentage of male and female faculty in the U.T. Departments of Botany, Microbiology, and Zoology versus the percentage of males and females in the national pool of Ph.D.s in those areas of the



biological sciences (life sciences) supported by those Departments.

Figure (2.16) The percentage of male and female faculty in the U.T. Departments of Chemistry and Biochemistry versus the percentage of males and females in the national pool of Ph.D.s in the fields of chemistry and biochemistry.

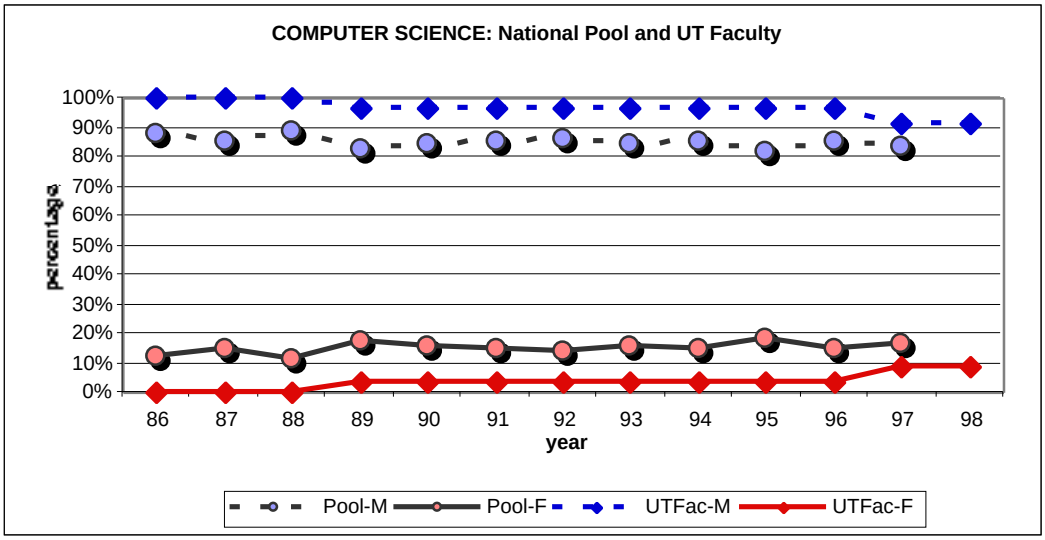


Figure (2.17) The percentage of male and female faculty in the U.T. Computer Science Department versus the percentage of males and females in the national pool of Ph.D.s in the field of computer science.

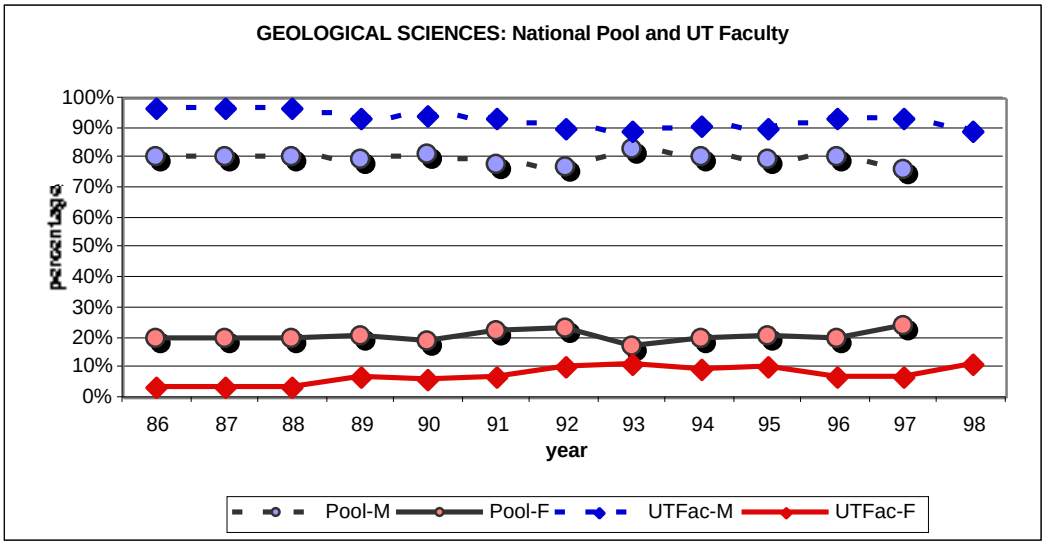


Figure (2.18) The percentage of male and female faculty in the U.T. Department Geology versus the percentage of males and females in the national pool of Ph.D.s in the field of geology.

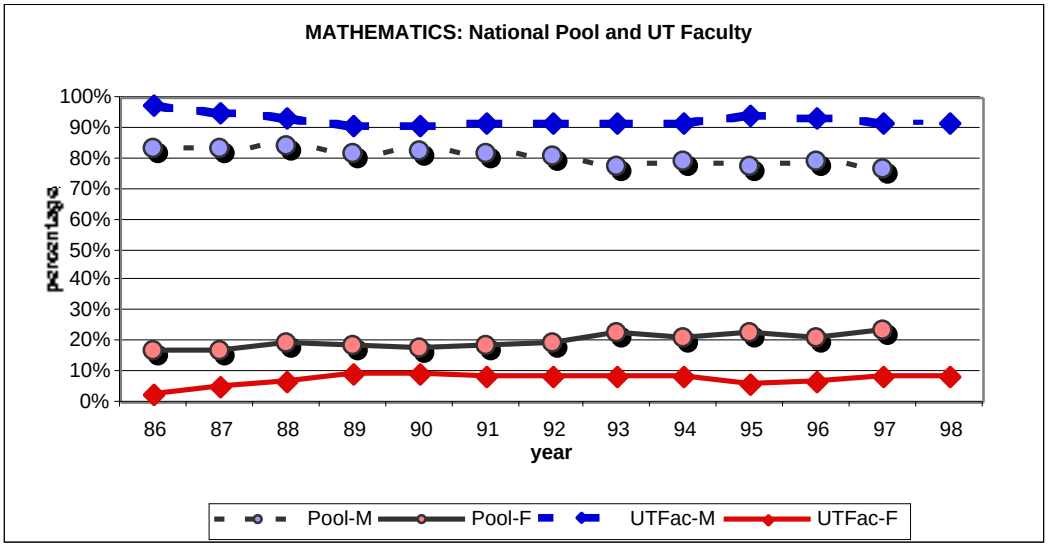


Figure (2.19) The percentage of male and female faculty in the U.T. Mathematics Department versus the percentage of males and females in the national pool of Ph.D.s in mathematics.

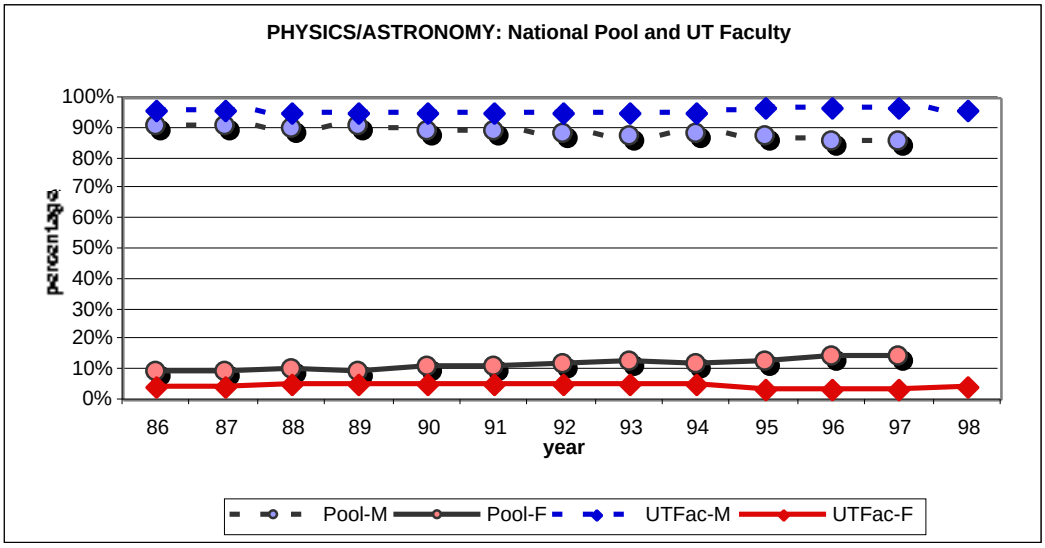


Figure (2.20) The percentage of male and female faculty in the U.T. Departments of Astronomy and Physics versus the percentage of males and females in the national pool of Ph.D.s in the fields of astronomy and physics.

2.4. Overview of CNS Data

We found some clear trends in data for the College of Natural Sciences. First, the average salary of women appears to decrease as one goes past the Assistant Professor rank. Tenured women are paid lower on the average than are the tenured men, and the margins appear to widen as the women advance in seniority. While the percentage of women students is increasing in all departments (Computer Science may be an exception), the percentage of women faculty remains more or less constant. The percentage of women Ph.D.s in the national pool, for every department, exceeds the percentage of women on the U.T. faculty in those departments. In some cases, the difference in percentage is very large. The biggest gaps lie in Chemistry and the Biological Sciences. These gaps, between the percentage of women faculty in the CNS and the percentage of women in the national pool, indicate that the College might have greater success in hiring women faculty if they recruited more aggressively.

3. The College of Engineering

The College of Engineering consists of six major Departments which include Aerospace Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, and Petroleum Engineering. It also has listed in Office of Institutional Studies data sheets, a Biomedical Engineering Department which appears to have only one faculty member so we did not include it in this study.

In this Section we plot exactly the same type of data that was considered in our study of the College of Natural Science in Section 2. We show faculty number and salary data separated by gender. (A discussion of how salary data was analyzed is given in Section 1 of this report.) We show percentages of male and female faculty and students. And we compare percentages of male and female faculty to the percentage of males and females in the national Ph.D. pool.

The national pool data comparisons were made as follows. We compared the percentage of male and female faculty in each of the major UT Engineering departments to the percent of male and female Ph.D. recipients in the field relevant to those Departments. For the U.T. Departments of Chemical, Civil, Mechanical and Petroleum Engineering, there were comparable engineering subfields in the national data. For Aerospace Engineering, we used the Aeronautical and Astronautical subfield for comparison, and we combined the numbers for the Computer and Electrical subfields to compare with the UT Department of Electrical and Computer Engineering.

In the plots which are given on subsequent pages, we use the following abbreviated notation: Aero=Aerospace, Chem=Chemical, Elec=Electrical, Mech=Mechanical, and Petro=Petroleum. Aero-M and Aero-F indicate Aerospace Engineering males and females, respectively. In Section (3.1) we analyze faculty number and salary data. In Section (3.2), we compare male and female percentages for faculty and students. In Section (3.3), we compare male and female faculty percentages to male and female percentages in the national pool of Ph.D. for each of the above departments of the Engineering College.

3.1 Engineering Faculty Number and Salary Data

On subsequent pages of this Section, we plot numbers of male and female faculty in each of the categories of Chair, Professorship, Professor, Associate Professor, and Assistant Professor. We also analyze salary data for males and females in each of those positions. A discussion of our treatment of salary data is given in Section 1.

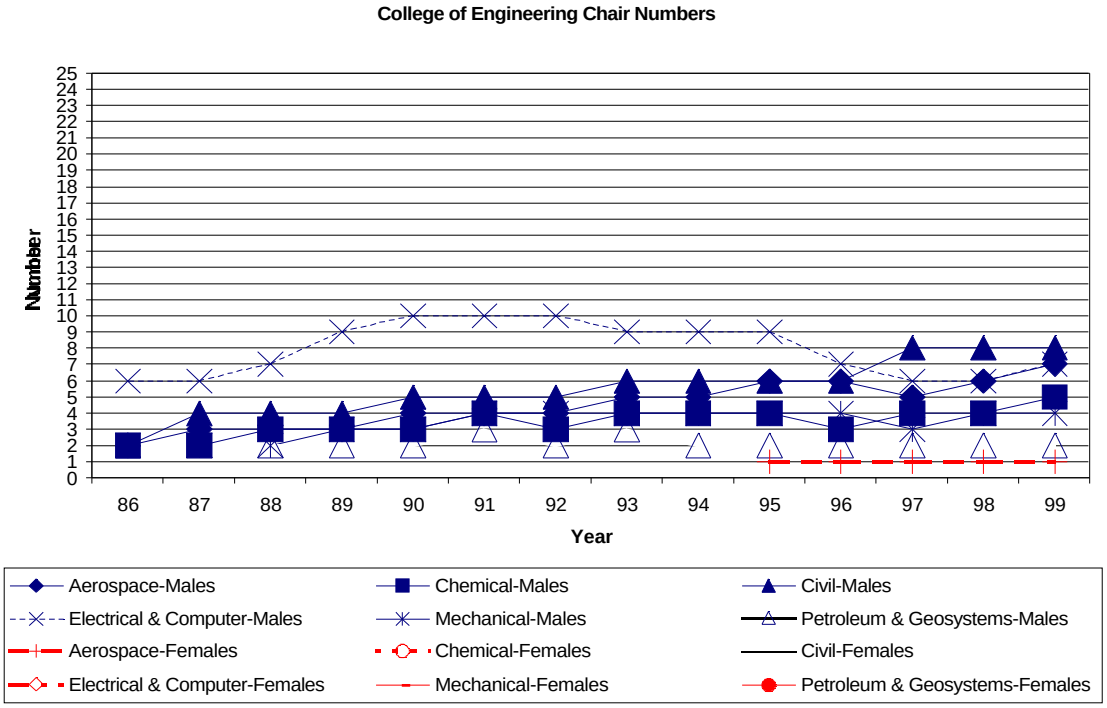


Figure (3.1a) Number of male and female ENG Chairs by department. (BLUE=males, RED=females)

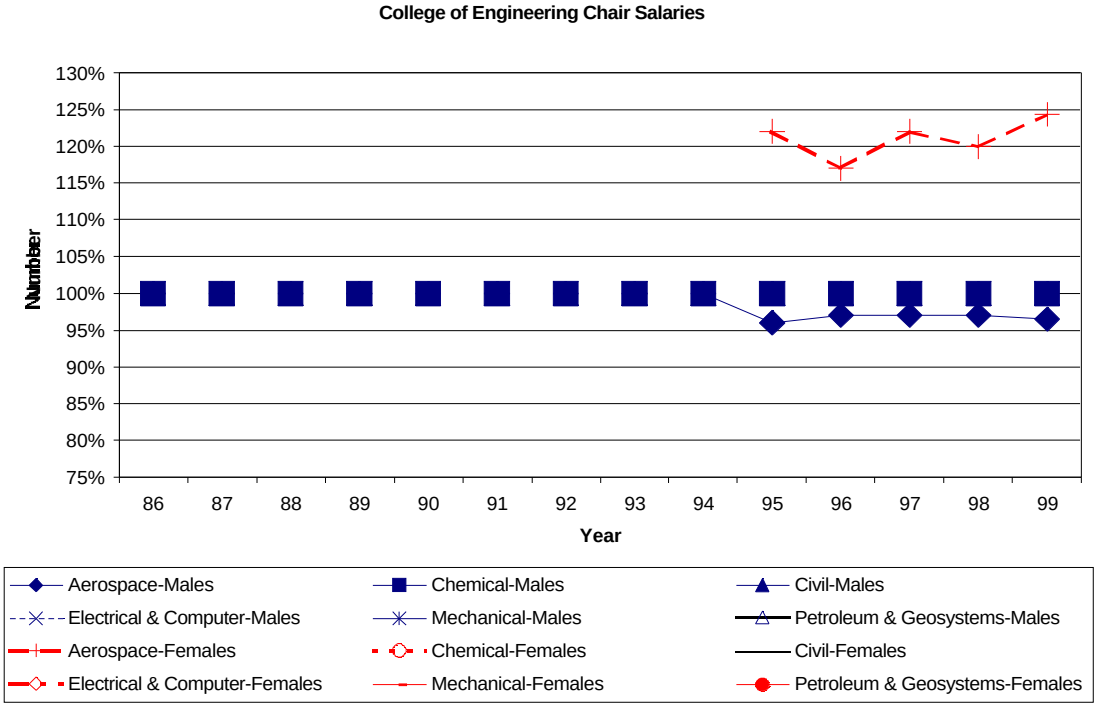


Figure (3.1b) Percent of department average salary for male and female ENG Chairs by department. (BLUE=males, RED=females)

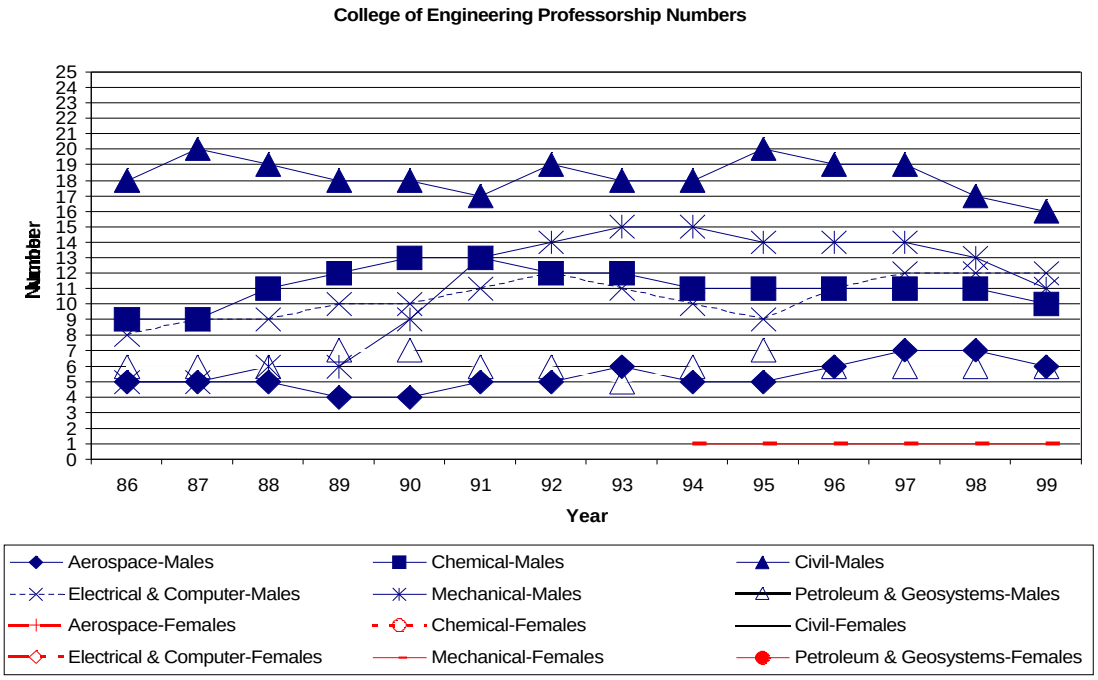


Figure (3.2a) Number of male and female ENG Professorships by department. (BLUE=males, RED=females)

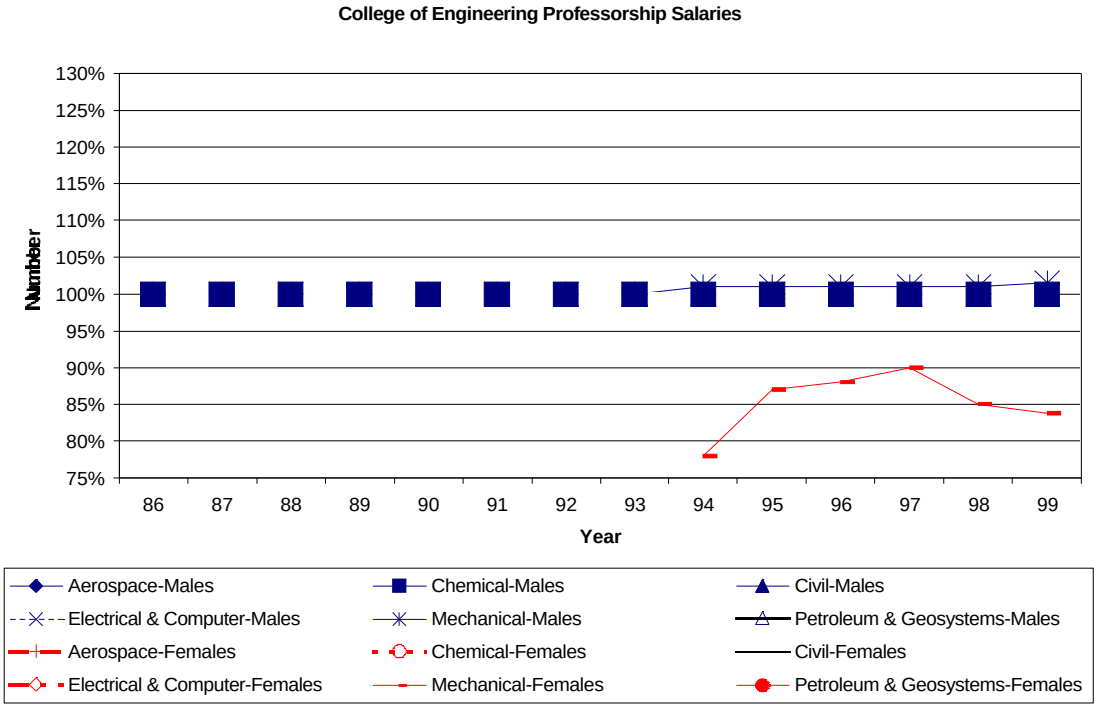


Figure (3.2b) Percent of department average salary for male and female ENG Professorships by department. (BLUE=males, RED=females)

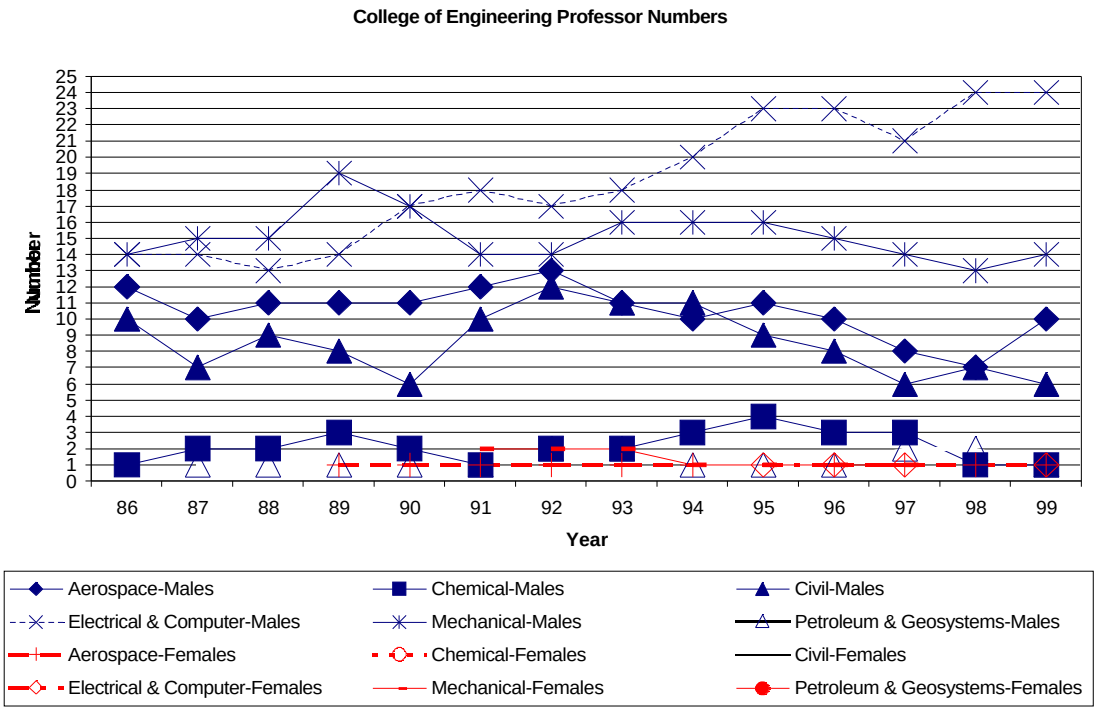


Figure (3.3a) Number of male and female ENG Professors by department. (BLUE=males, RED=females)

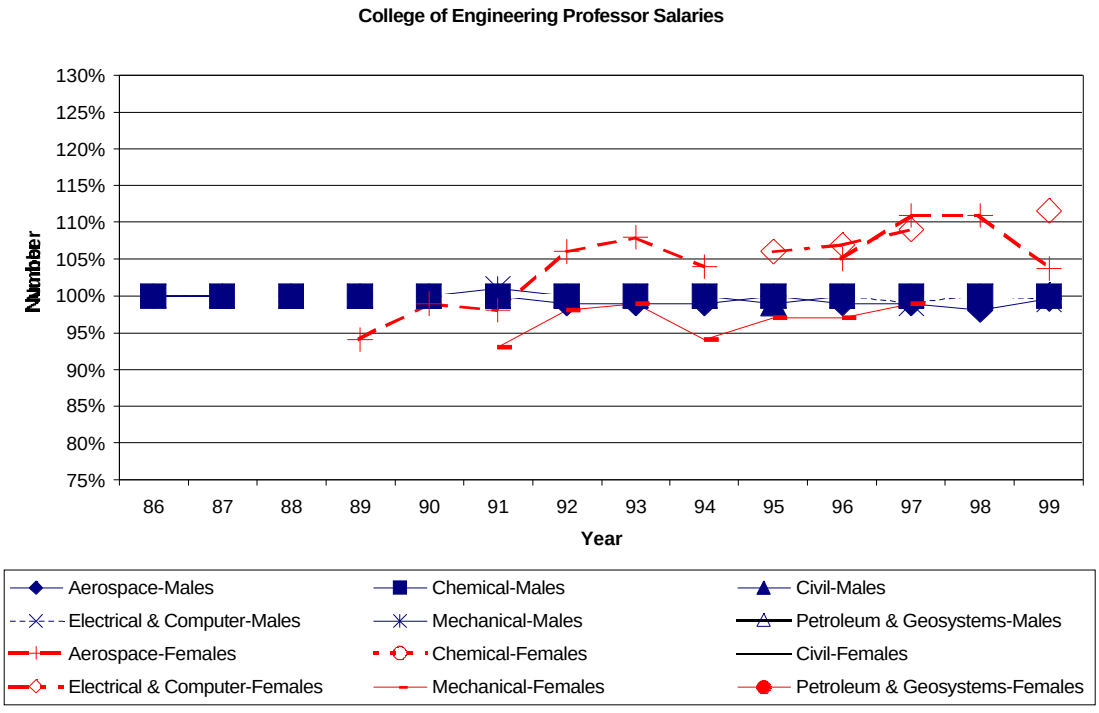


Figure (3.3b) Percent of department average salary for male and female ENG Professors by department. (BLUE=males, RED=females)

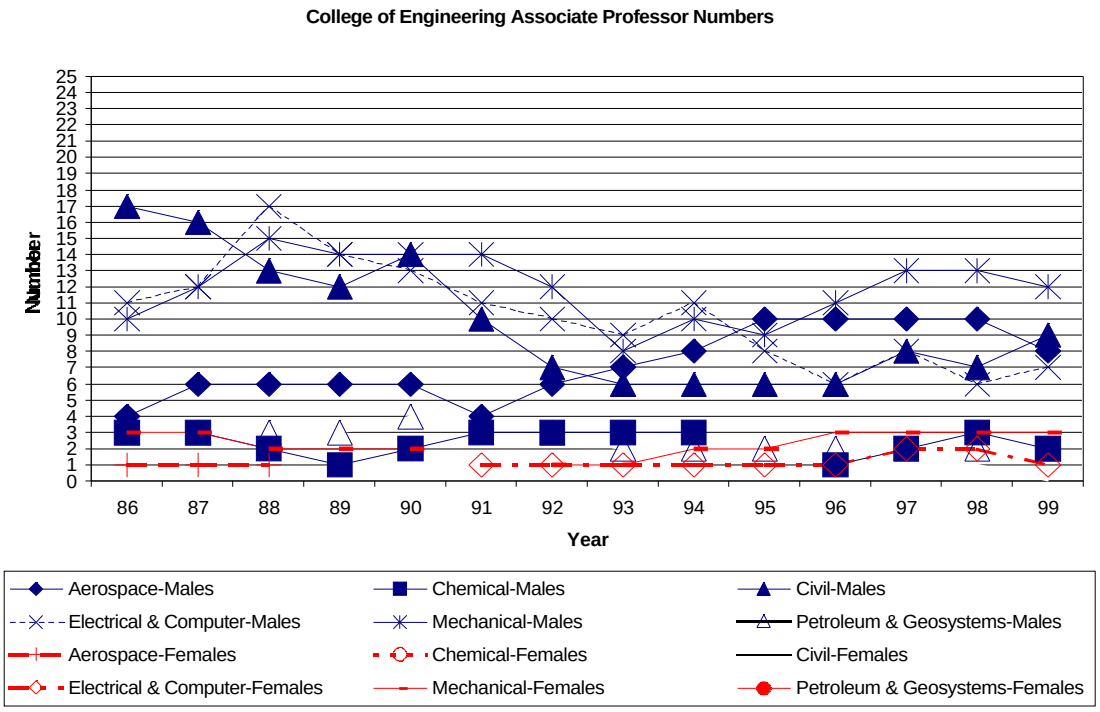


Figure (3.4a) Number of male and female ENG Associate Professors by department.(BLUE=males, RED=females)

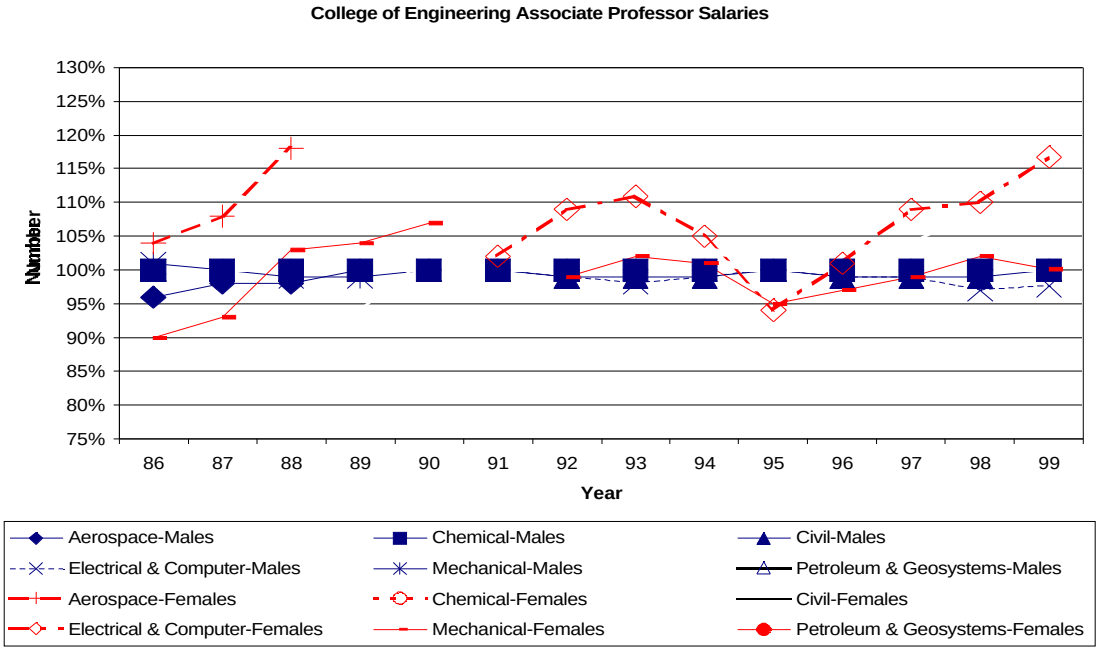


Figure (3.4b) Percent of department average salary for male and female ENG Associate Professors by department. (BLUE=males, RED=females)

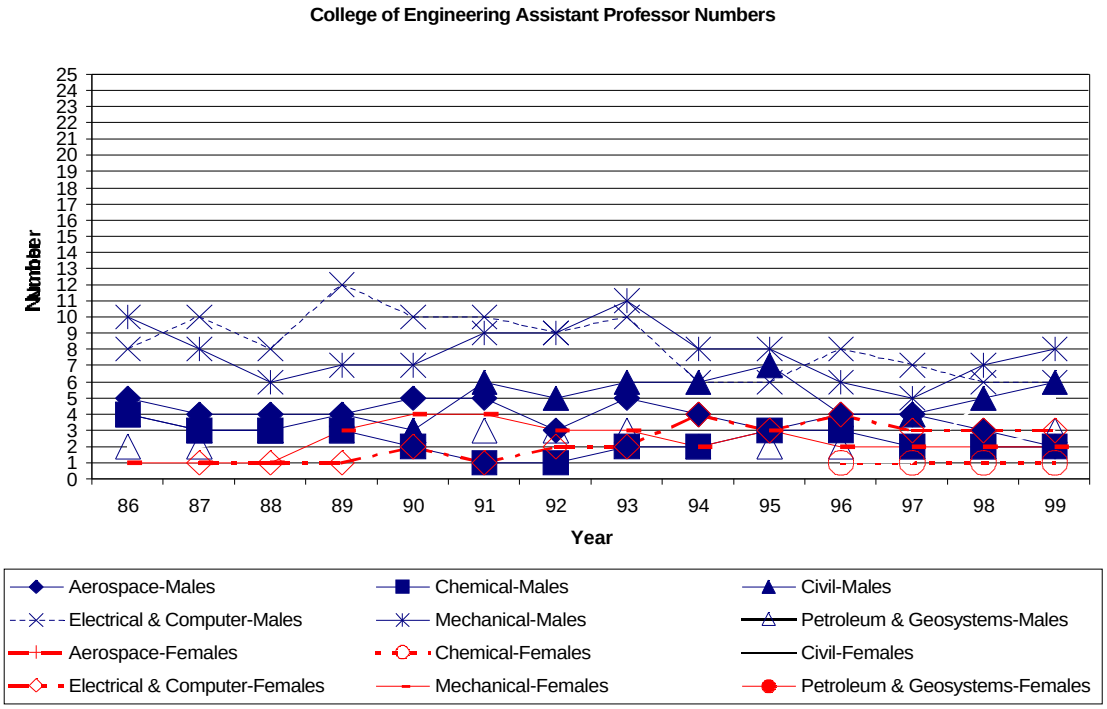


Figure (3.5a) Number of male and female ENG Assistant Professors by department. (BLUE=males, RED=females)

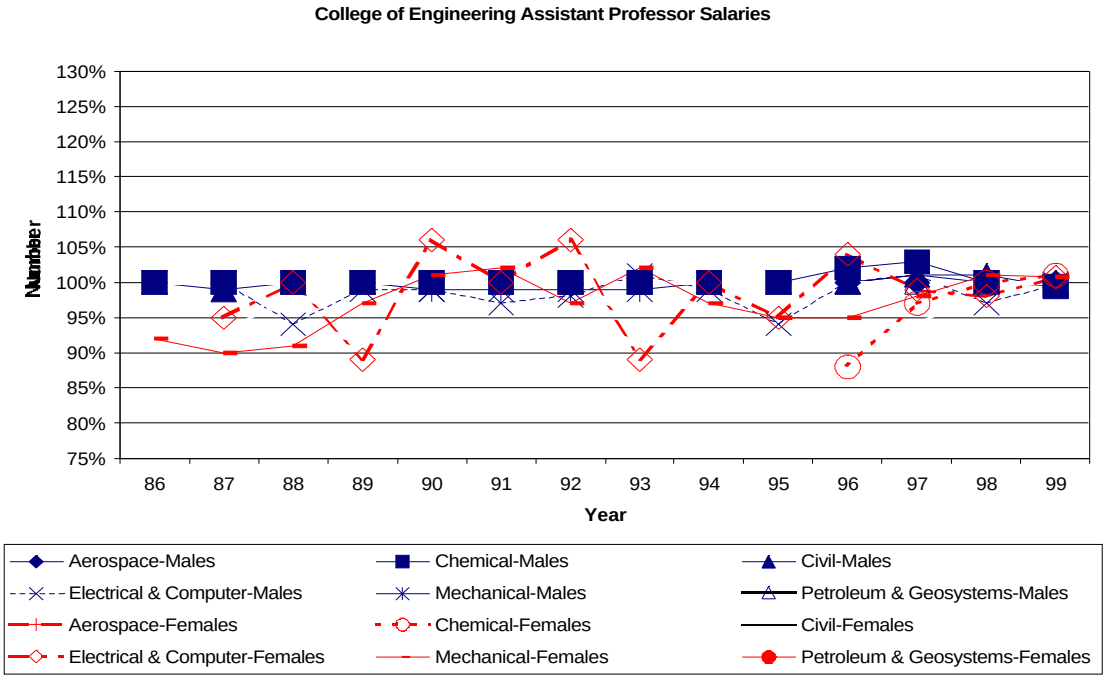


Figure (3.5b) Percent of department average salary for male and female ENG Assistant Professors by department. (BLUE=males, RED=females)

3.2. Male-Female Percentages for Engineering Faculty and Students

As we discussed in Section (2.2), the number of women faculty in a department is a very important factor in determining the kind of climate that exists in the department for the male and female students. In this section, we show the percentage of male and female faculty and percentage of male and female students in the Departments of Aerospace Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, and Petroleum Engineering. Students in majors for which there was no comparable Department, e.g. the Engineering Sciences undergraduate degree, Engineering Undetermined, and the graduate program in Environmental Health, were not included in this analysis.

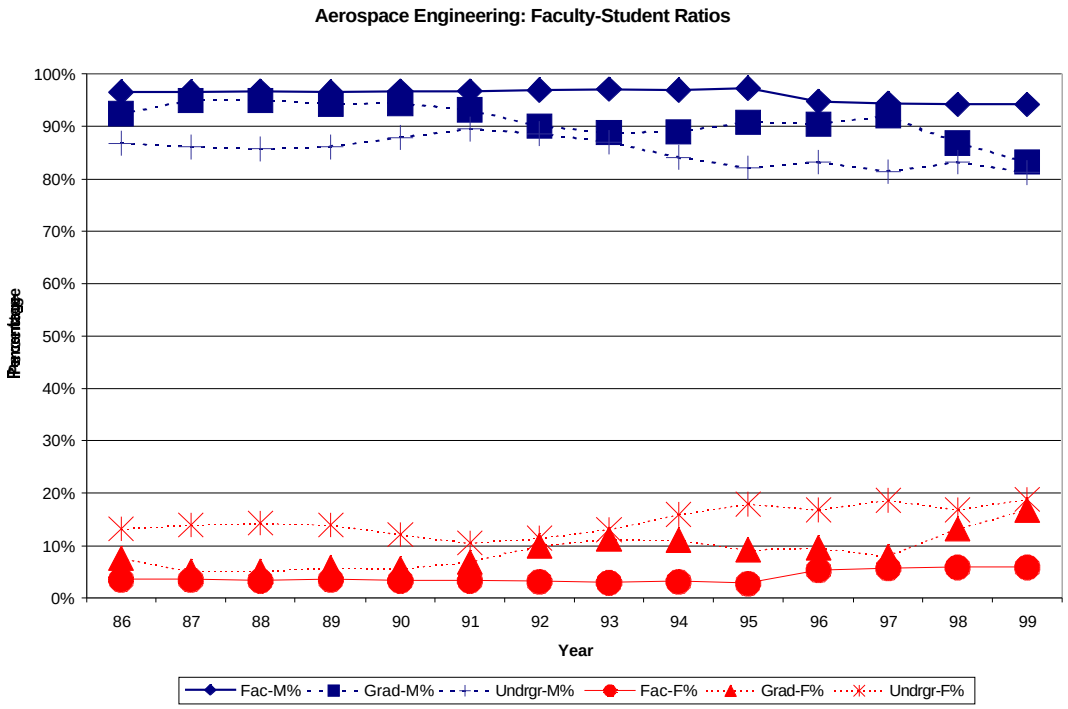


Figure (3.6) The percentage of male and female faculty, graduate students, and undergraduate students in the Aerospace Engineering Department.

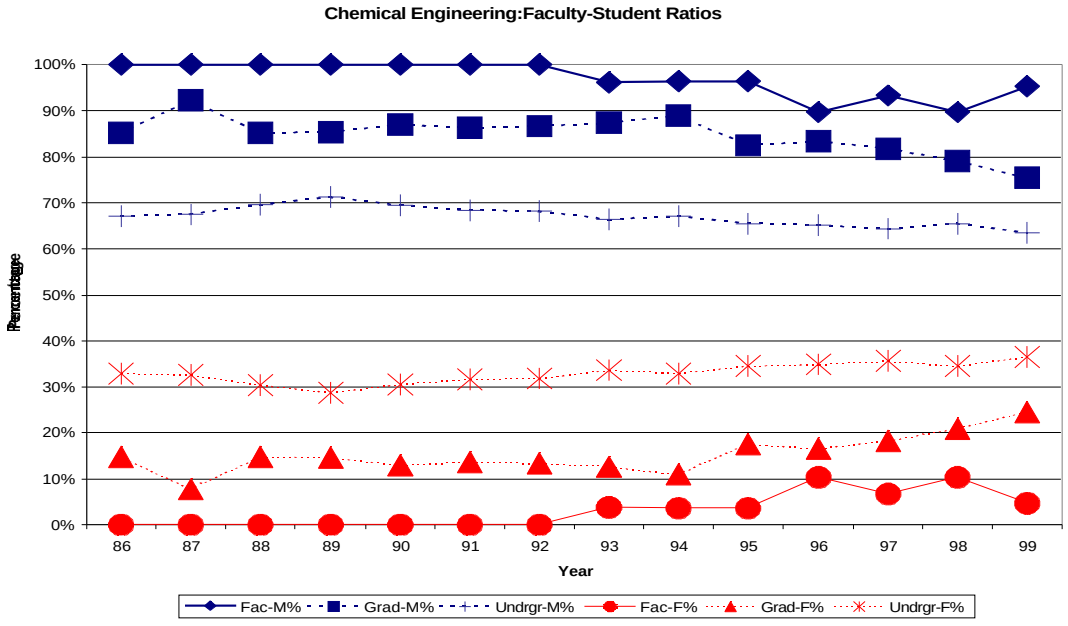


Figure (3.7) The percentage of male and female faculty, graduate students, and undergraduate students in the Chemical Engineering Department.

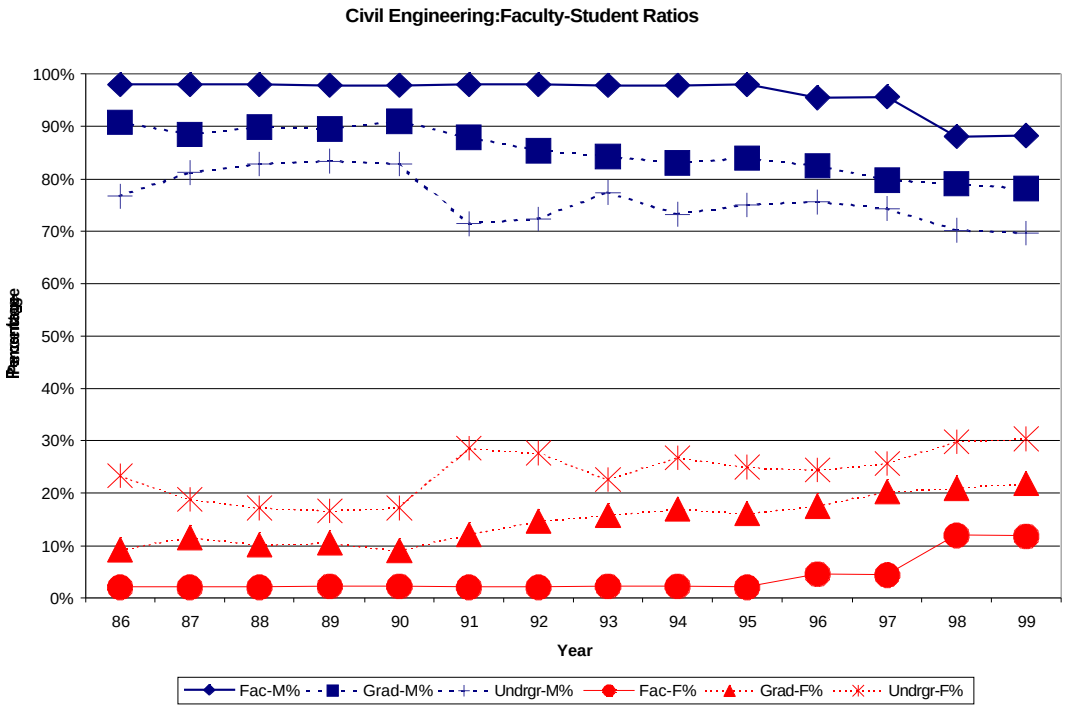


Figure (3.8) The percentage of male and female faculty, graduate students, and undergraduate students in the Civil Engineering Department.

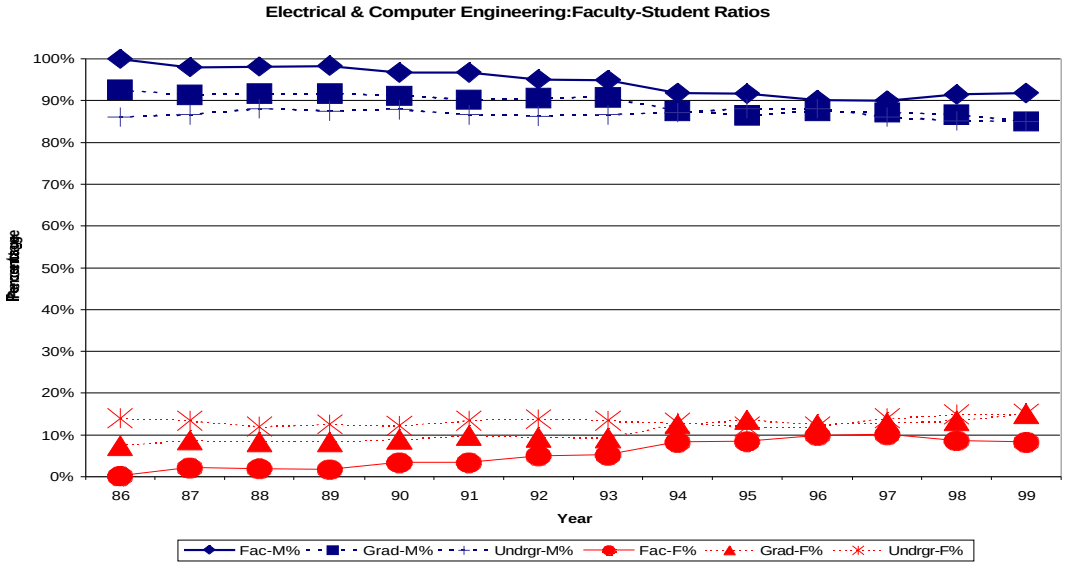


Figure (3.9) The percentage of male and female faculty, graduate students, and undergraduate students in the Electrical Engineering Department.

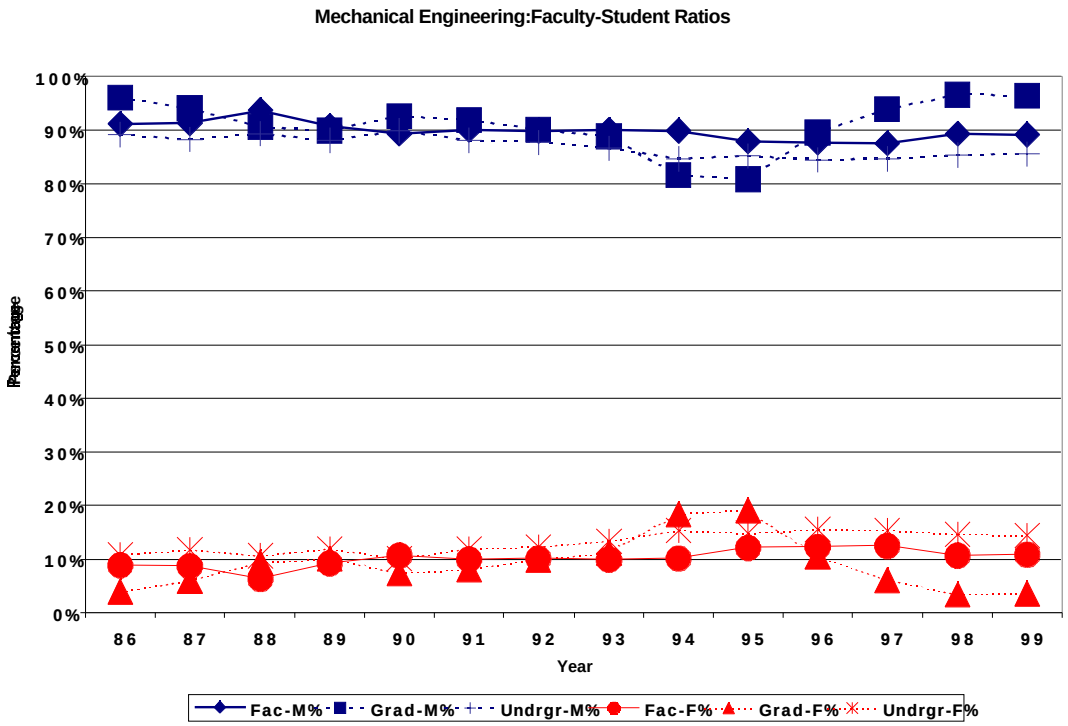


Figure (3.10) The percentage of male and female faculty, graduate students, and undergraduate students in the Mechanical Engineering Department.

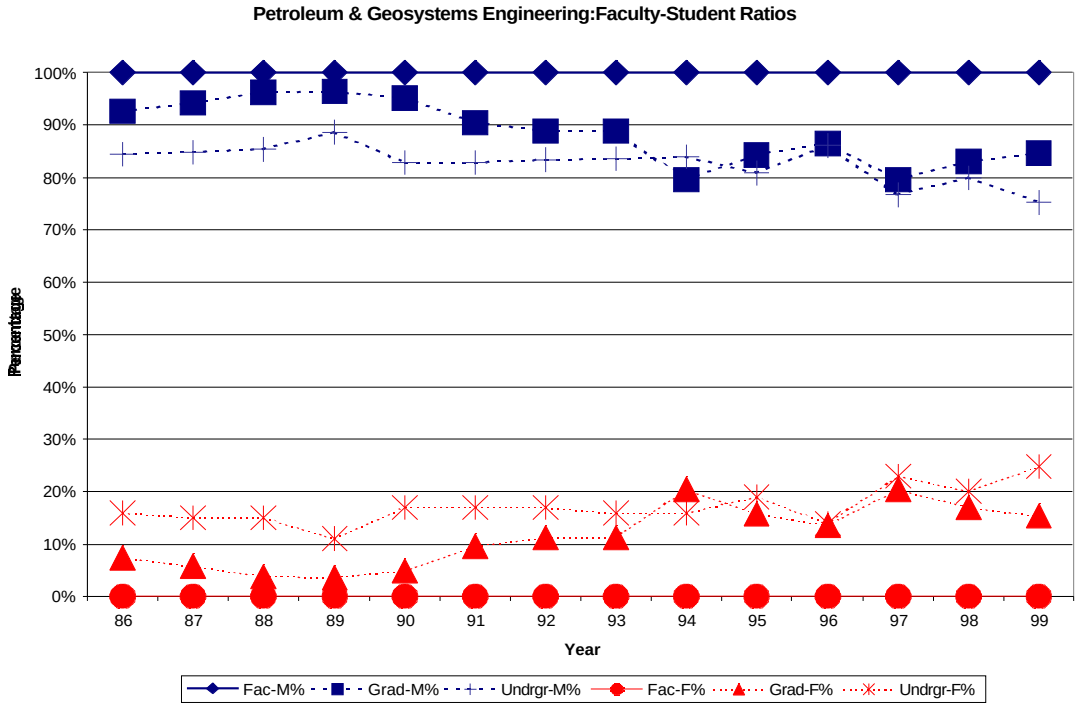


Figure (3.11) The percentage of male and female faculty, graduate students, and undergraduate students in the Petroleum Engineering Department.

3.3. Male-Female Ratios for Engineering Faculty and National Pool

The manner in which national pool data was compared to faculty percentages in each Department of the College of Engineering is described at the beginning of Section 3. Below we compare the percentage of male and female Ph.D. recipients in the national Ph.D. pool to the percentage of male and female faculty in each of the major Departments of the College of Engineering.

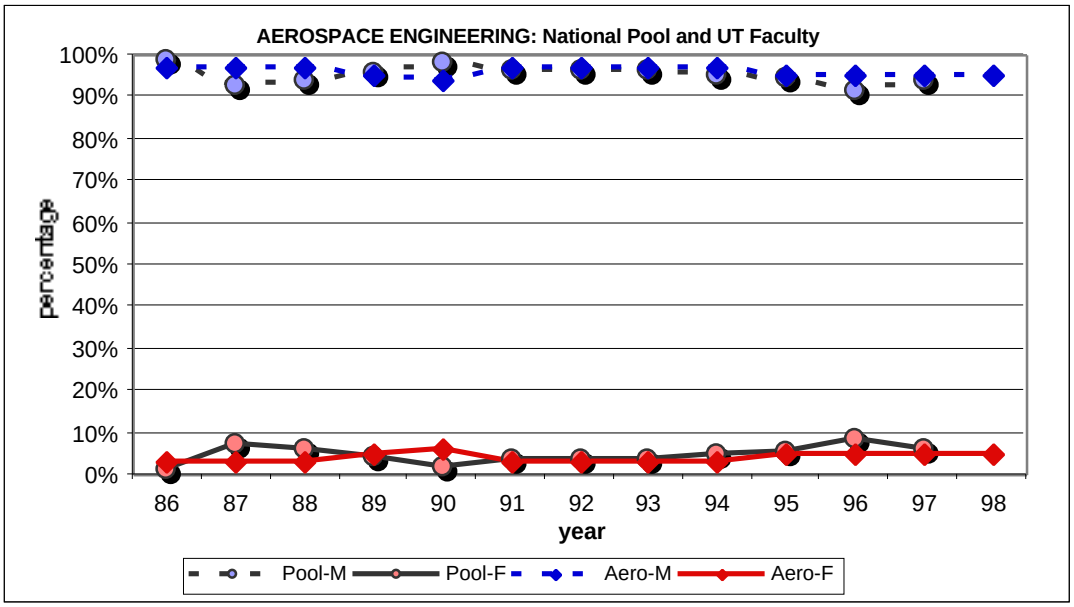


Figure (3.12) The percentage of male and female faculty in the U.T. Department of Aerospace Engineering versus the percentage of males and females in the national pool of Ph.D.s in the field aerospace engineering.

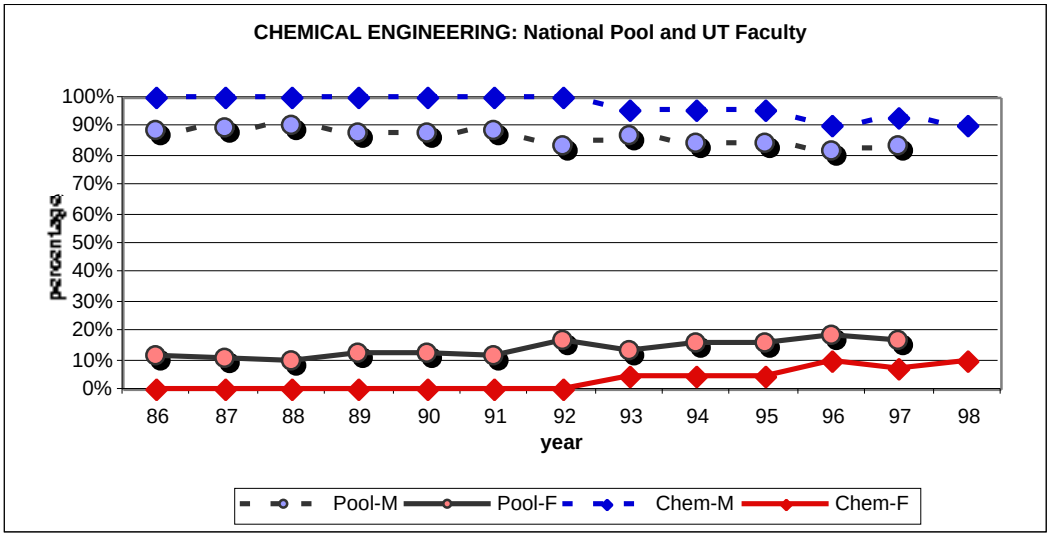


Figure (3.13) The percentage of male and female faculty in the U.T. Department of Chemical Engineering versus the percentage of males and females in the national pool of Ph.D.s in the field chemical engineering.

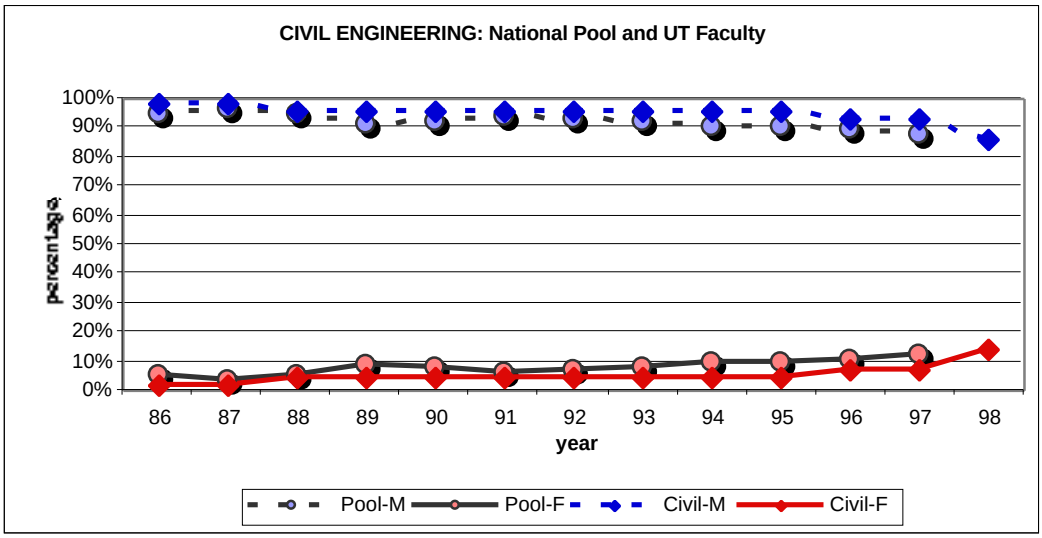


Figure (3.14) The percentage of male and female faculty in the U.T. Department of Civil Engineering versus the percentage of males and females in the national pool of Ph.D.s in the field civil engineering.

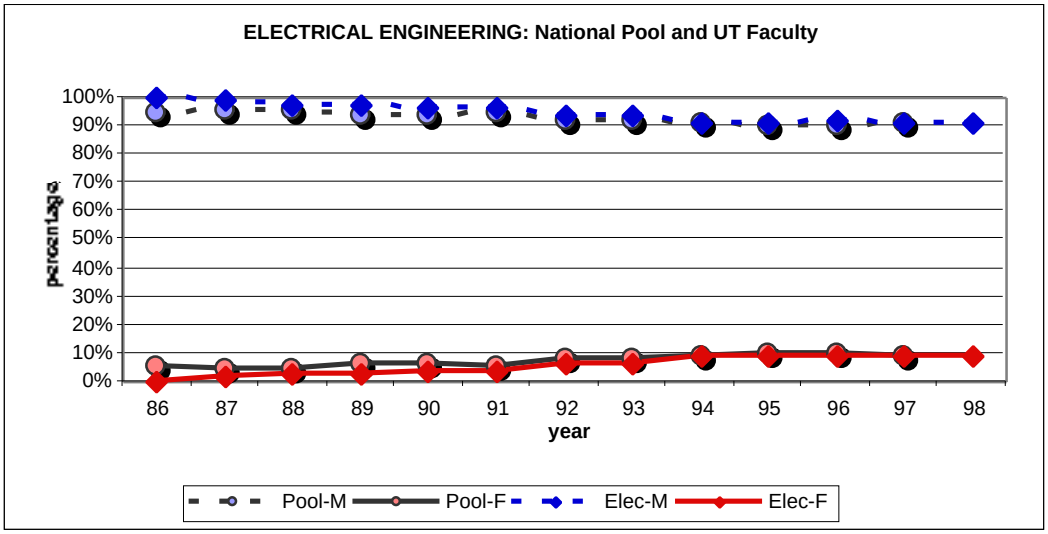


Figure (3.15) The percentage of male and female faculty in the U.T. Department of Electrical Engineering versus the percentage of males and females in the national pool of Ph.D.s in the field electrical engineering.

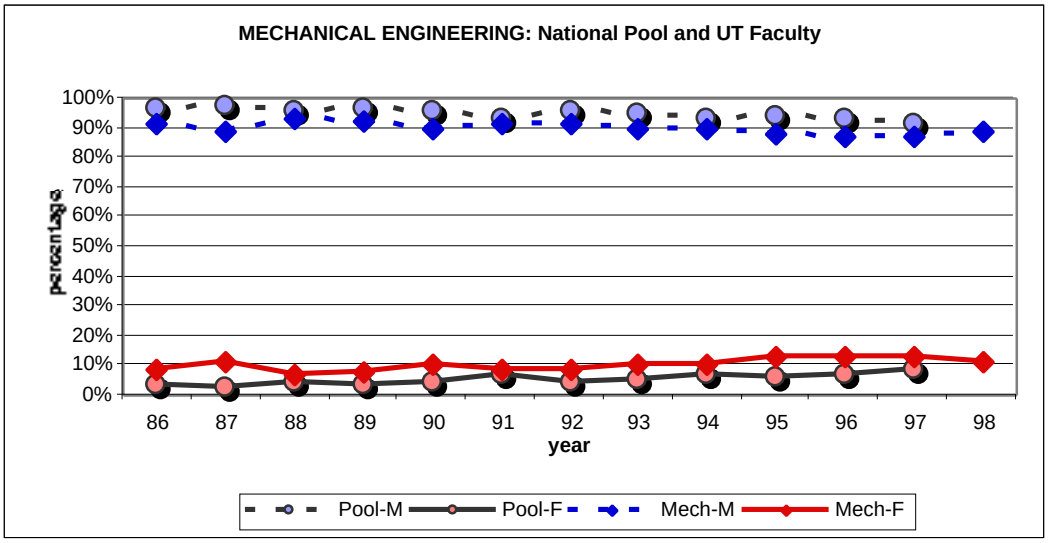


Figure (3.16) The percentage of male and female faculty in the U.T. Department of Mechanical Engineering versus the percentage of males and females in the national pool of Ph.D.s in the field mechanical engineering.

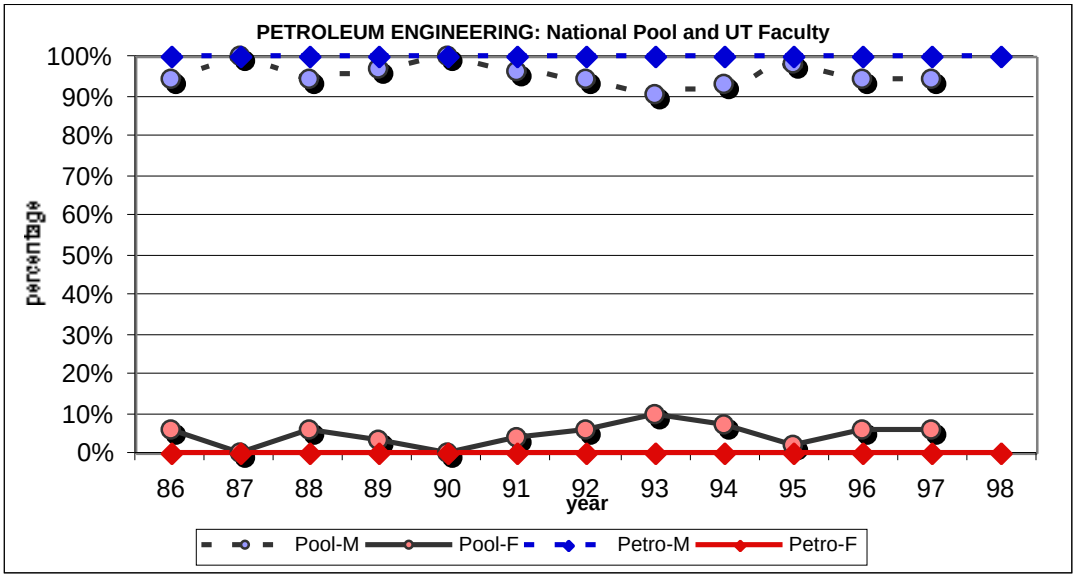


Figure (3.17) The percentage of male and female faculty in the U.T. Department of Petroleum Engineering versus the percentage of males and females in the national pool of Ph.D.s in the field petroleum engineering.

3.4. Overview of College of Engineering Data.

The College of Engineering has even fewer women, both in terms of numbers and in terms of percentages, than does the College of Natural Sciences. However, salary data does not show the decreasing salary trend for senior women which was apparent in the CNS data. There are so few women that the fluctuations are large. For all departments there are higher percentages of women students than women faculty, although the discrepancy is smaller than in the Natural Science departments. But, for many of the departments, the percentage of women faculty are tracking fairly well with the national pools. The only exception is the Department of Petroleum Engineering which has no women faculty.

4. Conclusions

The statistics shown in this report indicate considerable similarities between M.I.T. and U.T. Further, they warrant consideration of steps to improve the climate for women faculty and students at U.T. Austin. In their proposal, the women faculty at M.I.T. asked for an initiative to improve the status of women faculty in the School of Science. They wrote the following as quoted in the M.I.T. Report (http://web.mit.edu/fnl):

"This proposal has been developed by the tenured women faculty in the School of Science. It speaks to our serious concerns about the small number of women professors at M.I.T., and about the status and treatment of the women who are here. We believe that unequal treatment of women faculty impairs their ability to perform as educators, leaders in research, and models for women students…

We believe that discriminatory attitudes operate at the time of hiring junior faculty and influence the experiences of the women who are hired. Most discrimination at M.I.T., whether practiced by men or women, is largely unconscious. Often it is difficult to establish discrimination as a factor because any one case, no matter how disturbing or aberrant, can usually be described to its special circumstances… Thus, we need to develop safeguards to prevent, detect, and promptly correct the experiences that together constitute gender discrimination…

We believe that unequal treatment of women who come to M.I.T. makes it more difficult for them to succeed, causes them to be accorded less recognition when they do, and contributes so substantially to a poor quality of life that these women can actually become negative role models for younger women…

The heart of the problem is that equal talent and accomplishment are viewed as unequal when seen through the eyes of prejudice…There is a perception among many women faculty that there may be gender related inequalities in distribution of space and other resources, salaries, and distribution of awards and other forms of recognition. Currently, a glass ceiling exists within many departments…

We request that a committee be established…to deal with the status of women faculty in the School of Science… The role of the committee would be to review space, resource distribution, salaries, and teaching assignments for women faculty to guarantee that they are fair relative to those of their male colleagues. When inequities are detected, there should be a mechanism to initiate prompt action to correct these inequities."

Our current report, although more limited in its scope than the M.I.T. study, suggests that similar problems exist on our campus. We conclude our report by first outlining additional studies to further guide future action and then identifying possible immediate steps to improve the current situation.

Additional Studies. In the time available to us, we were only able to look at selected data. We did not attempt to talk with women faculty in detail about these issues. Other issues that have not yet been examined, but that are relevant to the climate for women and impact professional success, include how candidate pools are constructed for tenure track and endowed positions, promotion and retention rates, length of time to promotion,

distribution of committee assignments, distribution of teaching assignments, space allocation, allocation of other resources, and criteria for promotion to tenure.

We recently had made available to us the 1982 to 1997 tenure-track progression data for the Colleges of Natural Sciences and Engineering. A study of these data will provide an indication of how women and men cohorts progressed during this time period, as well as how many women and men left UT during this time period, and their stated reasons for doing so. Data concerning the number of women and men in hiring pools for tenure-track faculty hired in the past ten years, the number of women and men who were interviewed, and the number who declined offers for tenure-track positions, are readily available and need to be analyzed. We also ask that a more comprehensive study be done that could pinpoint possible sources of inequity among male and female faculty in the areas of space and resource allocation, teaching and committee assignments, and other indicators of climate. The purpose of these studies would be to guide steps that would then be taken to correct them.

Immediate Steps. Departments should be instructed that all hiring pools reflect a gender composition comparable to the national Ph. D. pool for those fields.

There is strong evidence that the composition of faculty search committees can limit the pool of candidates. To quote again from the MIT report, "The heart of the problem is that equal talent and accomplishment are viewed as unequal when seen through the eyes of prejudice." We recommend that departments be instructed to include women faculty on all searches for tenure-track faculty and endowed positions. This could result in an unfair burden on the very few women faculty in the departments in natural sciences and engineering, and other steps would need to be taken to balance their contributions in this crucial area.

Many departments in natural sciences and engineering use university monies to fund visiting lecturers and scholars. In view of the limited role models for women students in science and engineering, we recommend that Deans encourage departments to use more of these funds, than is now the case, to invite women scientists and engineers to the campus.

The State of Texas needs a broadly educated population as it goes into the next Century, and to accomplish this we need the best minds in our universities, not just the best minds of a subgroup of our population. We have every confidence that our current administration is committed to achieving this goal for our campus and for our state.

Appendix A: Data for the College of Natural Sciences

Figures (2.1a&b):

CNS Chair Male numbers

year	Ast-M	Bot-M	Ch/BCh-M	GeoSc-M	Math-M	MicBio-M	Phys-M	Zoo-M
86			1	3	3	1	2	
87		1	1	3	3	1	1	
88		1	1	3	4		1	
89		1	1	4	5	2	1	
90		1	1	4	6	2	3	
91		1	1	3	6	2	2	
92		1	1	3	5	2	3	
93		1	1	3	5	2	2	
94		1	1	3	6	2	1	3
95		1	1	3	7	3	2	3
96		1	1	3	7	3	2	3
97		1	1	4	7	4	2	3
98		1	1	5	5	4	2	3 1

CNS Chair Female numbers :

year	Bot-F	Ch/BCh-F	Math-F
86			
87			
88			1
89			1
90			1
91			1
92		1	1
93		1	1
94	1	1	1
95	1		1
96	1		1
97	1		1
98	1		1

CNS	Chair		salaries			
year	Bot-M	Ch/BCh-M	Math-M	Bot-F	Ch/BCh-F	Math-F
86						
87						
88						
89			102%			96%
90			103%			95%
91			103%			95%
92		105%	103%		86%	95%
93		105%	102%		86%	95%
94	106%	103%	102%	94%	92%	95%
95	106%		102%	94%		93%
96	105%		103%	95%		92%
97	106%		104%	94%		82%
98	110%		103%	90%		87%

Figures (2.2a&b):

Profship	Male	numbers							
year	Ast-M	Bot-M	Ch/BCh-M	CompSc-M	GeoSc-M	Math-M	MicBio-M	Phys-M	Zoo-M
86	5	2	5	8	14	4	1	7	2
87	5	2	4	9	14	6	1	5	4
88	4	2	3	9	11	6	1	4	4
89	7	2	4	8	10	6	1	4	5
90	7	2	6	8	10	7		4	4
91	7	2	5	8	8	7		3	3
92	6	2	8	8	10	6	1	4	4
93	6	2	10	8	9	7		4	6
94	7	2	10	7	9	7		5	6
95	7	2	10	9	10	8		6	6
96	7	2	9	9	10	9		4	5
97	7	2	8	10	10	9		4	5
98	7	2	9	10	10	9		5	6

Profship	Female	numbers					
year	Ch/BCh-F	CompSc-F	GeoSc-F	MicBio-F	Phys-F	Zoo-F	
86							1
87	1						1
88	1						1
89	1						1
90	1						
91	1						
92			1				
93			1			1	
94			1			1	
95		1	1			1	
96		1	1			1	
97		1	1			1	
98		1	1		1	1	

CNS	Profship	salaries								
year	Ch/BCh-M	CompSc-M	GeoSc-M	Physics-M	Zoo-M	Ch/BCh-F	CompSc-F	GeoSc-F	Physics-F	Zoo-F
86					88%					124%
87	104%				92%	85%				131%
88	105%				92%	86%				130%
89	101%				94%	95%				132%
90	100%					100%				
91	101%					96%				
92			101%					87%		
93			101%	106%				89%	76%	
94			101%	104%				89%	81%	
95		101%	100%	103%			87%	95%	84%	
96		101%	100%	105%			89%	97%	81%	
97		101%	100%	106%			90%	97%	76%	
98		101%	100%	104%			90%	100%	80%	

Figs. (2.3a&b):

CNS	Professor	Male	numbers						
year	Ast-M	Bot-M	Ch/BCh-M	CompSc-M	GeoSc-M	Math-M	MicBio-M	Phys-M	Zoo-M
86	6	11	19	3	2	19	11	31	20
87	6	9	21	1	6	18	10	33	16
88	6	9	24		5	21	9	38	16
89	4	9	24		7	20	9	37	16
90	4	8	20		7	19	9	36	16
91	4	8	21		7	19	9	38	17
92	5	8	20		6	21	8	37	17
93	7	8	16		6	20	9	36	16
94	6	8	16		7	22	9	35	18
95	6	6	15		3	21	8	33	19
96	7	6	16		3	20	8	35	19
97	9	6	17		3	22	7	36	18
98	8	8	13		2	22	7	33	16

CNS	Professor	Female	numbers					
year	Bot-F	Ch/BCh-F	GeoSc-F	Math-F	MicBio-F	Phys-F	Zoo-F	
86	1	1		1		1	2	
87	1			1		1	4	
88	1			1		2	4	
89	1			1		2	4	
90	1		1	1	1	2	4	
91	1		1	1	1	2	4	
92	2			1	1	2	4	
93	2			1	1	1	4	
94	1			1	1	1	3	
95	1			1	2	1	3	
96	1			1	3	1	3	
97	1			2	3	1	3	
98		1			2	3	1	

CNS year	Professor Bot-M	Male GeoSc-M	Salaries Math-M	MicBio-M	Phys-M	Zoo-M
86			101%		100%	101%
87	98%		101%		100%	101%
88	99%		101%		100%	101%
89	99%		101%		101%	101%
90	99%	101%	101%	102%	100%	100%
91	99%	101%	101%	102%	100%	100%
92	101%		101%	102%	100%	99%
93	101%		101%	102%	100%	100%
94	102%		101%	100%	100%	100%
95	103%		101%	102%	100%	100%
96	103%		101%	104%	100%	100%
97	103%		100%	102%	100%	100%
98	102%		100%	102%	100%	99%

CNS year	Professor Bot-F	Female GeoSc-F	Salaries Math-F	MicBio-F	Phys-F	Zoo-F
86			83%		104%	93%
87	114%		84%		100%	98%
88	112%		86%		92%	97%
89	111%		84%		91%	98%
90	109%	95%	86%	78%	95%	99%
91	109%	94%	86%	78%	94%	100%
92	97%		87%	81%	97%	103%
93	97%		86%	80%	85%	102%
94	81%		86%	101%	85%	103%
95	84%		89%	91%	86%	103%
96	84%		88%	90%	87%	103%
97	85%		97%	95%	89%	103%
98	87%		97%	95%	87%	111%

Figs. (2.4.a&b)

CNS	Associate	Professor	male	numbers					
year	Ast-M	Bot-M	Ch/BCh-M	CompSc-M	GeoSc-M	Math-M	MicBio-M	Phys-M	Zoo-M
86	5	3	9	4	4	13	2	10	7
87	4	3	7	5	5	10	2	11	5
88	6	3	3	6	5	7	2	8	8
89	5	3	4	9	3	10		6	7
90	6	3	3	10	3	9	1	5	9
91	6	4	3	9	3	9	1	6	7
92	6	3	2	7	2	7	1	5	8
93	4	3	4	8	3	7	1	6	7
94	4	3	4	10	3	6	1	7	5
95	4	3	6	8	3	7	1	9	4
96	3	3	6	9	3	5	1	15	4
97	1	3	4	8	3	5	2	15	4
98	1	1	6	9	3	7	2	14	5

CNS	Associate	Professor	female	numbers					
year	Ast-F	Bot-F	Ch/BCh-F	CompSc-F	GeoSc-F	Math-F	MicBio-F	Phys-F	Zoo-F
86			1			1		1	1	1
87			1			1	1	1	1	
88			1			1	1	1		
89			1		1	1	1	2		
90			1		1		1	1		
91	1	1			1		1	2		
92	1				1		2	1		
93	1				1		2	1		
94	1	1			1		2	1		
95	1	1	1				1	1		
96	1	1	1				1			
97	1	1	1				1			
98		1	1	1			1			

CNS	Associate	Professor	male	salaries					
year	Ast-M	Bot-M	Ch/BCh-M	CompSc-M	GeoSc-M	Math-M	MicBio-M	Phys-M	Zoo-M
86					97%		101%	100%	98%
87		100%			100%	100%	101%	100%	
88		100%			100%	100%	100%		
89		100%		99%	100%	100%			
90		99%		100%		100%	100%		
91	101%	100%		100%		100%	103%		
92	101%			99%		101%	102%		
93	101%			99%		102%	102%		
94	101%	102%		99%		100%	91%		
95	101%	103%	101%			100%	96%		
96	101%	103%	100%			100%			
97	98%	103%	99%			100%			
98	98%	103%	100%			100%			

CNS	Associate	Professor	female	salaries					
year	Ast-F	Bot-F	Ch/BCh-F	CompSc-F	GeoSc-F	Math-F	MicBio-F	Phys-F	Zoo-F
86					111%		98%	96%	115%
87		99%			102%	100%	98%	98%	
88		101%			99%	102%	99%		
89		101%		101%	100%	101%	100%		
90		102%		103%		100%	100%		
91	92%	101%		104%		100%	98%		
92	96%			106%		95%	99%		
93	98%			106%		95%	99%		
94	98%	93%		109%		99%	104%		
95	97%	92%	95%			100%	104%		
96	97%	91%	101%			100%			
97	102%	92%	102%			102%			
98	102%	97%	98%			103%			

Figs. (2.5.a&b)

CNS	Assistant	Professor	male	numbers					
year	Ast-M	Bot-M	Ch/BCh-M	CompSc-M	GeoSc-M	Math-M	MicBio-M	Phys-M	Zoo-M
86	4		6	13	5	1		5	5
87	4		8	13	4	4	2	4	8
88	2	2	8	12	5	6	2	4	6
89	2	3	6	7	4	3	2	6	6
90	1	3	8	8	5	1	4	8	4
91	1	3	7	7	4	5	4	10	5
92		3	7	6	4	8	4	10	2
93		3	6	6	2	8	3	9	4
94		1	5	5	4	7	1	11	4
95		3	3	6	4	6	2	9	5
96		4	3	7	3	5	2	4	5
97		4	4	7	4	5	2	3	5
98		4	3	6	4	3	2	3	4

CNS	Assistant	Professor	female	numbers				
year	Ast-F	Bot-F	Ch/BCh-F	CompSc-F	GeoSc-F	Math-F	MicBio-F	Zoo-F
86	1						2	
87	1	1					2	
88	2	1					2	
89	2	1	1		1	1	1	
90	2	1	1		1	1	1	
91	1	1	1		1	1		
92	1	1	1		2			
93	1	1	1		2			1
94	1		1		2			1
95					2			2
96			1		1			2
97			1	2	1			2
98		1	1	2	2			1

CNS	Assistant	Professor	male	salaries				
year	Ast-M	Bot-M	Ch/BCh-M	CompSc-M	GeoSc-M	Math-M	MicBio-M	Zoo-M
86	100%	100%						
87	101%						102%	
88	102%	99%					97%	
89	101%	99%	100%		101%	100%	99%	
90	101%	99%	100%		100%	93%	98%	
91	102%	99%	100%		100%	99%		
92		99%	100%		102%			
93			100%		101%			101%
94			100%		99%			101%
95					100%			100%
96			101%		100%			100%
97			100%	101%	100%			101%
98		101%	100%	101%	101%			100%

CNS	Assistant	Professor	female	salaries				
year	Ast-F	Bot-F	Ch/BCh-F	CompSc-F	GeoSc-F	Math-F	MicBio-F	Zoo-F
86	98%	98%						
87	97%						98%	
88	98%	103%					103%	
89	99%	103%	97%		97%	100%	102%	
90	100%	103%	98%		98%	107%	108%	
91	98%	103%	99%		99%	106%		
92		102%	99%		96%			
93			102%		99%			98%
94			98%		101%			98%
95					99%			101%
96			98%		100%			100%
97			99%	96%	102%			98%
98			100%	98%	98%			99%

Fig. (2.6)

ASTRONOMY Faculty and students by gender

year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	95%	66%	77%	5%	34%	23%
87	95%	63%	77%	5%	37%	23%
88	91%	70%	77%	10%	30%	23%
89	91%	73%	83%	10%	27%	17%
90	91%	78%	86%	10%	22%	14%
91	91%	75%	84%	10%	25%	16%
92	90%	83%	88%	10%	17%	12%
93	90%	74%	87%	10%	26%	13%
94	90%	74%	90%	10%	26%	10%
95	95%	75%	82%	5%	25%	18%
96	95%	64%	72%	5%	36%	28%
97	95%	79%	67%	5%	21%	33%
98	94%	69%	70%	6%	31%	30%

Fig. (2.7)

BOTANY Faculty and students by gender

year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	90%	47%	72%	11%	53%	28%
87	83%	58%	70%	17%	42%	30%
88	85%	70%	61%	15%	30%	39%
89	86%	86%	64%	14%	14%	36%
90	85%	60%	61%	15%	40%	39%
91	86%	73%	62%	14%	27%	38%
92	85%	50%	59%	15%	50%	41%
93	85%	56%	59%	15%	44%	41%
94	83%	40%	54%	17%	60%	46%
95	83%	29%	45%	17%	71%	55%
96	84%	47%	47%	16%	53%	53%
97	84%	41%	47%	16%	59%	53%
98	80%	46%	50%	20%	54%	50%

Fig. (2.8)

CHEM/BIOCHEM Faculty and students by gender

year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	98%	64%	74%	2%	36%	26%
87	98%	65%	71%	2%	35%	29%
88	98%	67%	72%	2%	33%	28%
89	96%	65%	70%	5%	35%	30%
90	95%	65%	67%	5%	35%	33%
91	95%	61%	62%	5%	39%	38%
92	95%	62%	65%	5%	38%	35%
93	95%	59%	68%	5%	41%	32%
94	95%	60%	68%	5%	40%	32%
95	97%	61%	66%	3%	39%	34%
96	95%	62%	66%	5%	38%	34%
97	95%	57%	66%	5%	43%	34%
98	95%	52%	66%	5%	48%	34%

Fig. (2.9)

COMPUTER SCI. year	Faculty and fac-M%	students by undgrM%	gender gradM%	fac-F%	undgrF%	gradF%
86	100%	74%	88%	0%	26%	12%
87	100%	77%	90%	0%	23%	10%
88	100%	76%	92%	0%	24%	8%
89	96%	78%	91%	4%	22%	9%
90	97%	78%	91%	3%	22%	9%
91	96%	80%	89%	4%	20%	11%
92	96%	81%	88%	4%	19%	12%
93	96%	81%	86%	4%	19%	14%
94	96%	84%	84%	4%	16%	16%
95	96%	84%	80%	4%	16%	20%
96	97%	84%	80%	3%	16%	20%
97	91%	83%	80%	9%	17%	20%
98	91%	82%	83%	9%	18%	17%

Fig. (2.10)

GEOLOGICAL SCI. year	Faculty and fac-M%	students by undgrM%	gender gradM%	fac-F%	undgrF%	gradF%
86	97%	70%	77%	3%	30%	23%
87	97%	72%	77%	3%	28%	23%
88	97%	63%	77%	3%	37%	23%
89	94%	60%	77%	7%	40%	23%
90	94%	60%	77%	6%	40%	23%
91	93%	63%	76%	7%	38%	24%
92	90%	69%	74%	10%	31%	26%
93	89%	68%	73%	11%	32%	27%
94	91%	67%	73%	9%	33%	27%
95	90%	68%	72%	10%	32%	28%
96	93%	65%	72%	7%	35%	28%
97	93%	56%	70%	7%	44%	30%
98	89%	54%	72%	11%	46%	28%

Fig. (2.11)

MATHEMATICS Faculty and students by gender						
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	97%	60%	75%	3%	40%	25%
87	95%	62%	73%	5%	38%	27%
88	93%	59%	73%	7%	41%	27%
89	91%	57%	72%	9%	43%	28%
90	91%	54%	77%	10%	46%	23%
91	91%	56%	79%	9%	44%	21%
92	92%	59%	79%	8%	41%	21%
93	92%	57%	73%	8%	43%	27%
94	92%	54%	77%	8%	46%	23%
95	94%	53%	76%	6%	47%	24%
96	93%	52%	72%	7%	48%	28%
97	92%	51%	70%	8%	49%	30%
98	92%	51%	71%	8%	49%	29%

Fig. (2.12)

MICROBIOLOGY Faculty and students by gender						
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	82%	58%	55%	18%	42%	45%
87	83%	56%	49%	17%	44%	51%
88	82%	50%	51%	18%	50%	49%
89	80%	50%	56%	20%	50%	44%
90	82%	57%	54%	18%	43%	46%
91	82%	55%	57%	18%	45%	43%
92	82%	51%	69%	18%	49%	31%
93	81%	46%	67%	19%	54%	33%
94	80%	52%	69%	20%	48%	31%
95	81%	49%	62%	19%	51%	38%
96	81%	47%	60%	19%	53%	40%
97	81%	44%	61%	19%	56%	39%
98	77%	42%	61%	24%	58%	39%

Fig. (2.13)

PHYSICS	Faculty and	students by	gender			
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	97%	89%	93%	4%	11%	7%
87	96%	85%	93%	4%	15%	7%
88	97%	89%	93%	4%	11%	7%
89	96%	92%	93%	4%	8%	7%
90	97%	89%	92%	3%	11%	8%
91	97%	87%	92%	3%	13%	8%
92	97%	91%	89%	3%	9%	11%
93	97%	87%	89%	3%	13%	11%
94	97%	86%	92%	3%	14%	8%
95	97%	88%	90%	3%	12%	10%
96	97%	83%	91%	3%	17%	9%
97	97%	81%	91%	3%	19%	9%
98	97%	80%	89%	3%	20%	11%

Fig. (2.14)

ZOOLOGY	Faculty and	students by	gender			
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	90%	51%	57%	11%	49%	43%
87	87%	56%	50%	13%	44%	50%
88	87%	51%	52%	13%	49%	48%
89	87%	49%	58%	13%	51%	42%
90	89%	48%	58%	11%	52%	42%
91	89%	51%	59%	11%	49%	41%
92	89%	52%	54%	11%	48%	46%
93	87%	49%	57%	13%	51%	43%
94	89%	49%	54%	11%	51%	46%
95	87%	52%	49%	13%	48%	51%
96	87%	46%	49%	13%	54%	51%
97	87%	42%	48%	14%	58%	53%
98	94%	35%	52%	6%	65%	48%

Fig. (2.15)

BIOLOGICAL	SCIENCES	National	Pool and UT	Facuty
year	Pool-M	Pool-F	UTFac-M	UTFac-F
86	68%	33%	88%	12%
87	64%	36%	85%	15%
88	64%	36%	86%	14%
89	64%	36%	85%	15%
90	63%	37%	86%	14%
91	63%	37%	86%	14%
92	62%	38%	86%	14%
93	60%	40%	85%	15%
94	60%	40%	86%	14%
95	59%	41%	85%	15%
96	58%	42%	85%	15%
97	57%	43%	85%	15%

98	86%	14%	

Fig. (2.16)

CHEMISTRY year	BIOCHEMISTRY Pool-M	National Pool-F	Pool and UT UTFac-M	Facuty UTFac-F
86	76%	24%	98%	2%
87	76%	24%	98%	2%
88	76%	24%	98%	2%
89	71%	29%	96%	5%
90	73%	27%	95%	5%
91	73%	27%	95%	5%
92	71%	29%	95%	5%
93	70%	30%	95%	5%
94	69%	31%	95%	5%
95	66%	34%	97%	3%
96	69%	31%	95%	5%
97	67%	33%	95%	5%
98			95%	5%

Fig. (2.17)

COMPUTER year	SCIENCE Pool-M	National Pool-F	Pool and UT UTFac-M	Facuty UTFac-F
86	88%	12%	100%	0%
87	86%	14%	100%	0%
88	89%	11%	100%	0%
89	83%	18%	96%	4%
90	84%	16%	97%	3%
91	85%	15%	96%	4%
92	86%	14%	96%	4%
93	84%	16%	96%	4%
94	85%	15%	96%	4%
95	81%	19%	96%	4%
96	85%	15%	97%	3%
97	84%	16%	91%	9%
98			91%	9%

Fig. (2.18)

GEOLOGICAL year	SCIENCES Pool-M	National Pool-F	Pool and UT UTFac-M	Facuty UTFac-F
86	80%	20%	97%	3%
87	80%	20%	97%	3%
88	81%	20%	97%	3%
89	80%	21%	94%	7%
90	82%	19%	94%	6%
91	78%	22%	93%	7%
92	77%	23%	90%	10%
93	83%	17%	89%	11%
94	81%	20%	91%	9%
95	80%	21%	90%	10%
96	81%	19%	93%	7%
97	76%	24%	93%	7%

98			89%	11%

Fig. (2.19)

MATHEMATICS	National	Pool and UT	Facuty	
year	Pool-M	Pool-F	UTFac-M	UTFac-F
86	83%	17%	97%	3%
87	83%	17%	95%	5%
88	84%	19%	93%	7%
89	82%	18%	91%	9%
90	82%	18%	91%	10%
91	81%	19%	91%	9%
92	81%	19%	92%	8%
93	77%	23%	92%	8%
94	79%	21%	92%	8%
95	78%	22%	94%	6%
96	79%	21%	93%	7%
97	77%	24%	92%	8%
98			92%	8%

Fig. (2.20)

PHYSICS/ ASTRONOMY	National	Pool and UT	Facuty	
year	Pool-M	Pool-F	UTFac-M	UTFac-F
86	91%	9%	96%	4%
87	90%	10%	96%	4%
88	90%	10%	95%	5%
89	91%	9%	95%	5%
90	89%	11%	95%	5%
91	89%	11%	95%	5%
92	88%	12%	95%	5%
93	87%	13%	95%	5%
94	88%	12%	95%	5%
95	87%	13%	96%	4%
96	86%	14%	96%	4%
97	86%	14%	96%	4%
98			96%	4%

Appendix B: Data for the College of Engineering

Figs. (3.1a&b)

Engineering year	Chair Aero-M	number Chem-M	Civil-M	Elec-M	Mech-M	Petro-M	Aero-F	
86	2	2	**2**	**6**	2	2		
87	3	2	**4**	**6**	2	2		
88	3	3	**4**	**7**	2	2		
89	3	3	**4**	**9**	3	2		
90	4	3	**5**	**10**	3	2		
91	4	4	**5**	**10**	4	3		
92	4	3	**5**	**10**	4	2		
93	5	4	**6**	**9**	4	3		
94	5	4	**6**	**9**	4	2		
95	6	4	**6**	**9**	4	2	1	
96	6	3	**6**	**7**	4	2	1	
97	5	4	**8**	**6**	3	2	1	
98	6	4	**8**	**6**	4	2	1	
99	7	5	**8**	**7**	4	2	1	

Engineering year	Chair Aero-M	salary Aero-F
86		
87		
88		
89		
90		
91		
92		
93		
94		
95	96%	122%
96	97%	117%
97	97%	122%
98	97%	120%
99	97%	124%

Figs. (3.2a&b)

Engineering year	Professorship Aero-M	Chem-M	Civil-M	Elec-M	Mech-M	Petro-M	Mech-F	number
86	5	9	18	8	5	6		
87	5	9	20	9	5	6		
88	5	11	19	9	6	6		
89	4	12	18	10	6	7		
90	4	13	18	10	9	7		
91	5	13	17	11	13	6		
92	5	12	19	12	14	6		
93	6	12	18	11	15	5		
94	5	11	18	10	15	6	1	
95	5	11	20	9	14	7	1	
96	6	11	19	11	14	6	1	
97	7	11	19	12	14	6	1	
98	7	11	17	12	13	6	1	
99	6	10	16	7	11	6	1	

Engineering year	Professorship Mech-M	Salary Mech-F
86		
87		
88		
89		
90		
91		
92		
93		
94	101%	78%
95	101%	87%
96	101%	88%
97	101%	90%
98	101%	85%
99	101%	84%

Figs. (3.3a&b)

Engineering	Professor	numbers								
year	Aero-M	Chem-M	Civil-M	Elec-M	Mech-M	Petro-M	Aero-F	Civil-F	Elec-F	Mech-F
86	12	1	10	14.06	14					
87	10	2	7	14	15	1				
88	11	2	9	13	15	1				
89	11	3	8	14	19	1	1			
90	11	2	6	17	17	1	1			
91	12	1	10	18	14	1	1			2
92	13	2	12	17	14	2	1			2
93	11	2	11	18	16	2	1			2
94	10	3	11	20	16	1	1			1
95	11	4	9	23	16	1		1	1	1
96	10	3	8	23	15	1	1		1	1
97	8	**3**	6	21	14	2	1		1	1
98	7	**1**	7	24	13	2	1			
99	10	**1**	6	24	14	1	1	1	1	

Engineering	Professor	salaries						
year	Aero-M	Civil-M	Elec-M	Mech-M	Aero-F	Civil-F	Elec-F	Mech-F
86								
87								
88								
89	100%				94%			
90	100%				99%			
91	100%			101%	98%			93%
92	99%			100%	106%			98%
93	99%			100%	108%			99%
94	99%			100%	104%			94%
95		99%	100%	100%		109%	106%	97%
96	99%		100%	100%	105%		107%	97%
97	99%		99%	100%	111%		109%	99%
98	98%				111%			
99	100%	100%	100%		104%	99%	112%	

Figs. (3.4a&b)

Engineering	Associate	Professor	number						
year	Aero-M	Chem-M	Civil-M	Elec-M	Mech-M	Petro-M	Aero-F	Civil-F	Elec-F	Mech-F
86	4	3	17	11	10	3	1			3
87	6	3	16	12	12	3	1			3
88	6	2	13	17	15	3	1			2
89	6	1	12	14	14	3		1		2
90	6	2	14	13	14	4		1		2
91	4	3	10	11	14	4		1	1	
92	6	3	7	10	12	3		1	1	1
93	7	3	6	9	8	2		1	1	1
94	8	3	6	11	10	2		1	1	2
95	10		6	8	9	2			1	2
96	10	1	6	6	11	2		1	1	3
97	10	2	8	8	13	2		1	2	3
98	10	3	7	6	13	2		1	2	3
99	8	2	9	7	12	2			1	3

Engineering	Associate	Professor	salaries					
year	Aero-M	Civil-M	Elec-M	Mech-M	Aero-F	Civil-F	Elec-F	Mech-F
86	96%			101%	104%			90%
87	98%			100%	108%			93%
88	98%			99%	118%			103%
89		100%		99%		94%		104%
90		100%		100%		102%		107%
91		100%	100%			104%	102%	
92		99%	99%	100%		102%	109%	99%
93		99%	98%	100%		104%	111%	102%
94		99%	99%	100%		101%	105%	101%
95			100%	100%			94%	95%
96		99%	99%	100%		104%	101%	97%
97		99%	99%	100%		104%	109%	99%
98		99%	97%	100%		109%	110%	102%
99			98%	100%			117%	100%

Figs. (3.5a&b)

Engineering	Assistant	Professor	male numbers			
year	Aero-M	Chem-M	Civil-M	Elec-M	Mech-M	Petro-M
86	5	4	4	8	10	2
87	4	3	3	10	8	2
88	4	3	3	8	6	3
89	4	3	4	12	7	3
90	5	2	3	10	7	3
91	5	1	6	10	9	3
92	3	1	5	9	9	3
93	5	2	6	10	11	3
94	4	2	6	6	8	2
95	3	3	7	6	8	2
96	4	3	4	8	6	2
97	4	2	4	7	5	2
98	3	2	5	6	7	2
99	2	2	6	6	8	3

Engineering	Assistant	Professor	female	numbers
year	Chem-F	Civil-F	Elec-F	Mech-F
86		1		1
87		1	1	1
88		1	1	1
89			1	3
90			2	4
91			1	4
92			2	3
93			2	3
94			4	2
95			3	3
96	1	1	4	2
97	1	1	3	2
98	1	5	3	2
99	1	5	3	2

Engineering	Assistant		Professor	salaries				
year	Chem-M	Civil-M	Elec-M	Mech-M	Chem-F	Civil-F	Elec-F	Mech-F
86		100%		100%		93%		92%
87		99%	100%	100%		93%	95%	90%
88		100%	94%	100%		98%	100%	91%
89			99%	100%			89%	97%
90			99%	99%			106%	101%
91			97%	99%			100%	102%
92			98%	99%			106%	97%
93			101%	99%			89%	102%
94			99%	100%			100%	97%
95			94%	100%			95%	95%
96	102%	100%	100%	100%	88%	93%	104%	95%
97	103%	101%	101%	101%	97%	94%	99%	98%
98	100%	101%	97%	100%	100%	99%	98%	101%
99	100%	99%	100%	100%	101%	101%	101%	101%

Fig. (3.6)

AEROSPACE	ENGINEERING	faculty and	student	ratios			
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%	
86	97%	87%	92%	3%	13%	8%	
87	97%	86%	95%	3%	14%	5%	
88	97%	86%	95%	3%	14%	5%	
89	95%	86%	94%	5%	14%	6%	
90	94%	88%	94%	6%	12%	6%	
91	97%	90%	93%	3%	11%	7%	
92	97%	89%	90%	3%	11%	10%	
93	97%	87%	89%	3%	13%	11%	
94	97%	84%	89%	3%	16%	11%	
95	95%	82%	91%	5%	18%	9%	
96	95%	83%	91%	5%	17%	10%	
97	95%	81%	92%	5%	19%	8%	
98	95%	83%	87%	5%	17%	13%	
99	94%	81%	83%	6%	19%	17%	

Fig. (3.7)

CHEMICAL ENGINEERING faculty and student ratios						
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	100%	67%	85%	0%	33%	15%
87	100%	67%	92%	0%	33%	8%
88	100%	70%	85%	0%	30%	15%
89	100%	71%	85%	0%	29%	15%
90	100%	69%	87%	0%	31%	13%
91	100%	68%	86%	0%	32%	14%
92	100%	68%	87%	0%	32%	13%
93	96%	66%	87%	4%	34%	13%
94	96%	67%	89%	4%	33%	11%
95	96%	65%	83%	4%	35%	18%
96	90%	65%	83%	10%	35%	17%
97	93%	64%	82%	7%	36%	18%
98	90%	66%	79%	10%	35%	21%
99	95%	64%	75%	5%	36%	25%

Fig. (3.8)

CIVIL ENGINEERING faculty and student ratios						
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	98%	77%	91%	2%	23%	9%
87	98%	81%	89%	2%	19%	12%
88	96%	83%	90%	4%	17%	10%
89	96%	83%	90%	4%	17%	10%
90	96%	83%	91%	4%	17%	9%
91	96%	71%	88%	4%	29%	12%
92	96%	72%	85%	4%	28%	15%
93	96%	77%	84%	4%	23%	16%
94	96%	73%	83%	4%	27%	17%
95	96%	75%	84%	4%	25%	16%
96	93%	76%	82%	7%	24%	18%
97	93%	74%	80%	7%	26%	20%
98	86%	70%	79%	15%	30%	21%
99	88%	70%	78%	12%	30%	22%

Fig. (3.9)

ELECTRICAL ENGINEERING faculty and student ratios						
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	100%	86%	93%	0%	14%	8%
87	99%	87%	91%	2%	13%	9%
88	97%	88%	92%	3%	12%	8%
89	97%	88%	92%	3%	13%	8%
90	96%	88%	91%	4%	12%	9%
91	96%	87%	90%	4%	13%	10%
92	94%	86%	91%	6%	14%	9%
93	94%	87%	91%	6%	13%	9%
94	91%	87%	88%	9%	13%	13%
95	91%	88%	86%	9%	12%	14%
96	92%	88%	88%	9%	12%	13%
97	91%	86%	87%	9%	14%	13%
98	91%	85%	87%	9%	15%	13%
99	92%	85%	85%	8%	15%	15%

Fig. (3.10)

MECHANICAL ENGINEERING faculty and student ratios						
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%
86	91%	89%	96%	9%	11%	4%
87	89%	88%	94%	11%	12%	6%
88	93%	89%	91%	7%	11%	9%
89	92%	88%	90%	8%	12%	10%
90	90%	90%	93%	10%	10%	8%
91	91%	88%	92%	9%	12%	8%
92	91%	88%	90%	9%	12%	10%
93	90%	87%	89%	10%	13%	11%
94	90%	85%	82%	10%	15%	18%
95	88%	85%	81%	13%	15%	19%
96	87%	85%	90%	13%	16%	11%
97	87%	85%	94%	13%	15%	6%
98	89%	85%	97%	11%	15%	3%
99	89%	86%	96%	11%	14%	4%

Fig. (3.11)

PETROLEUM ENGINEERING faculty and student ratios							
year	fac-M%	undgrM%	gradM%	fac-F%	undgrF%	gradF%	
86	100%	84%	93%	0%	16%	8%	
87	100%	85%	94%	0%	15%	6%	
88	100%	85%	96%	0%	15%	4%	
89	100%	89%	96%	0%	11%	4%	
90	100%	83%	95%	0%	17%	5%	
91	100%	83%	91%	0%	17%	10%	
92	100%	83%	89%	0%	17%	11%	
93	100%	84%	89%	0%	16%	11%	
94	100%	84%	80%	0%	16%	21%	
95	100%	81%	84%	0%	19%	16%	
96	100%	86%	86%	0%	14%	14%	
97	100%	77%	80%	0%	23%	21%	
98	100%	80%	83%	0%	20%	17%	
99	100%	75%	85%	0%	25%	15%	

Fig. (3.12)

AEROSPACE ENGINEERING National Pool and UT Faculty				
year	Pool-M	Pool-F	Aero-M	Aero-F
86	99%	1%	97%	3%
87	93%	7%	97%	3%
88	94%	6%	97%	3%
89	96%	5%	95%	5%
90	98%	2%	94%	6%
91	97%	3%	97%	3%
92	97%	3%	97%	3%
93	97%	4%	97%	3%
94	95%	5%	97%	3%
95	94%	6%	95%	5%
96	92%	8%	95%	5%
97	94%	6%	95%	5%
98			95%	5%

Fig. (3.13)

CHEMICAL ENGINEERING year	National Pool-M	Pool-F	Pool and Chem-M	UT Faculty Chem-F
86	89%	11%	100%	0%
87	89%	11%	100%	0%
88	90%	10%	100%	0%
89	88%	12%	100%	0%
90	88%	13%	100%	0%
91	88%	12%	100%	0%
92	84%	17%	100%	0%
93	87%	13%	96%	4%
94	84%	16%	96%	4%
95	84%	16%	96%	4%
96	82%	19%	90%	10%
97	83%	17%	93%	7%
98			90%	10%

Fig. (3.14)

CIVIL ENGINEERING year	National Pool-M	Pool-F	Pool and Civil-M	UT Faculty Civil-F
86	95%	5%	98%	2%
87	96%	4%	98%	2%
88	95%	5%	96%	4%
89	91%	9%	96%	4%
90	92%	8%	96%	4%
91	94%	6%	96%	4%
92	93%	7%	96%	4%
93	92%	8%	96%	4%
94	91%	9%	96%	4%
95	90%	10%	96%	4%
96	89%	11%	93%	7%
97	88%	12%	93%	7%
98			86%	14%

Fig. (3.15)

ELECTRICAL ENGINEERING		National	Pool and	UT Faculty
year	Pool-M	Pool-F	Elec-M	Elec-F
86	95%	5%	100%	0%
87	96%	4%	99%	2%
88	95%	5%	97%	3%
89	94%	6%	97%	3%
90	93%	7%	96%	4%
91	95%	5%	96%	4%
92	92%	8%	94%	6%
93	92%	8%	94%	6%
94	91%	9%	91%	9%
95	90%	10%	91%	9%
96	90%	10%	92%	9%
97	91%	9%	91%	9%
98			91%	9%

Fig. (3.16)

MECHANICAL ENGINEERING year	Pool-M	Pool-F	National Pool and Mech-M	UT Faculty Mech-F
86	97%	3%	91%	9%
87	97%	3%	89%	11%
88	96%	4%	93%	7%
89	97%	3%	92%	8%
90	96%	4%	90%	10%
91	93%	7%	91%	9%
92	96%	4%	91%	9%
93	95%	5%	90%	10%
94	93%	7%	90%	10%
95	94%	6%	88%	13%
96	93%	7%	87%	13%
97	91%	9%	87%	13%
98			89%	11%

Fig. (3.17)

PETROLEUM ENGINEERING year	Pool-M	Pool-F	National Pool and Petro-M	UT Faculty Petro-F
86	94%	6%	100%	0%
87	100%	0%	100%	0%
88	94%	6%	100%	0%
89	97%	4%	100%	0%
90	100%	0%	100%	0%
91	96%	4%	100%	0%
92	94%	6%	100%	0%
93	90%	10%	100%	0%
94	93%	7%	100%	0%
95	98%	2%	100%	0%
96	94%	6%	100%	0%
97	94%	6%	100%	0%
98			100%	0%