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Women in Leadership Positions. School of Natural, Chemical and Exact Sciences – National University of Misiones (UNaM)

Género Femenino en Cargos de Conducción. Facultad de Ciencias Exactas, Químicas y Naturales (UNaM)

Gênero Feminino em Posições de Condução. Faculdade de Ciências Exatas, Químicas e Naturais (UNaM)

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Abstract

We aimed to learn the distribution according to gender, age, teaching seniority and scholarship degrees of teachers who fulfilled leadership positions in the Faculty of Natural, Chemical and Exact Sciences, since its creation. Of a total of 117 positions, 68% corresponded to men and 32% to women. Academic Deans, with a total of 24, had no women; Academic Vice-Deans, had 2.5 times more men than women (m/f); Academic Division, 1.6 times more m/f; Extension Division, 3.3 times more m/f; Research Division, 1.8 times more m/f; Graduate School Division, total 1, 1 woman; School of Nursing, 2.5 times more m/f. Between the period 1957-1997, we observed 11 women out of 60 total positions (18%); and, in the period between 1998-2022, we observed 26 women out of 56 total positions (46%). The current age at accepting the position was: women 48 years (42-54) and men 43 years (36-51.5) (p=0.055). Teaching seniority (in years): women, 23 (13.5-29) and men, 16 (10-23) (p=0.017). The distribution among Schools showed that: The School of Chemical Engineering held the majority of leadership positions (60%), followed by the Biochemistry Program (14%) and the Genetics Program (4%). We concluded that, throughout the history of the School, every 10 leadership positions, 3.2 were held by a woman, and that increased in the last 25 years. However, no woman held the position of Dean in the 65 years of the Institution's life.

Keywords: Keywords: Female gender; Seniority; Seniority; University faculty; Age; Seniority.

Resumen

Los objetivos consistieron en conocer la distribución según género, edad, antigüedad docente y título de grado de docentes que cumplieron funciones de conducción en la Facultad de Ciencias Exactas, Químicas y Naturales desde su creación. Sobre 117 cargos totales, 68% correspondieron al género masculino y 32% al femenino; Decanato, total 24, ninguna mujer; Vice Decanato, 2,5 veces > masculino/femenino (m/f); Secretaría Académica 1,6 veces > m/f; Secretaría Extensión, 3,3 veces > m/f; Secretaría Investigación, 1,8 veces > m/f; Secretaría Posgrado, total 1, femenino 1; Dirección Escuela Enfermería, 2,5 veces > f/m. Período 1957-1997: 11 femenino / 60 cargos totales (18%) y Período 1998-2022: 26 femenino / 56 cargos totales (46%). Edad al asumir el cargo: femenino 48 (RI:42-54) y masculino 43 (RI:36-51,5) años (p=0,055). Antigüedad docente: femenino, 23 (RI:13,5-29) y masculino, 16 (RI:10-23) años (p=0,017). Ingeniería Química ocupó la mayoría de los cargos de conducción (60%), seguido por Bioquímica (14%) y Licenciatura en Genética (4%). Se concluye que, a lo largo de la historia de la Facultad, cada 10 cargos de conducción, 3,2 fueron ocupados por el género femenino, mayor en los últimos 25 años, Sin embargo, ninguna mujer ocupó el cargo de Decana en los 65 años de vida de la institución.

Palabras Clave: Género femenino; Cargos de conducción; Docentes universitarios; Edad; Antigüedad docente.

Resumo

Os objetivos foram conhecer a distribuição por género, idade, antiguidade docente e titulação dos docentes que exerceram funções de chefia na Faculdade de Ciências Exatas, Químicas e Naturais desde a sua criação. Do total de 117 cargos, 68% correspondiam ao gênero masculino e 32% ao gênero feminino; Reitoria, total de 24, sem mulheres; Vice-Reitor, 2,5 vezes > homem/mulher (m/f); Secretaria Acadêmica 1,6 vezes > m/f; Extensão da Secretaria, 3,3 vezes > m/f; Secretaria de Pesquisa, 1,8 vezes > m/f; Secretaria de Pós-Graduação, total 1, feminino 1; Endereço da Escola de Enfermagem, 2,5 vezes >f/m. Período 1957-1997: 11 mulheres/60 cargos no total (18%) e Período 1998-2022: 26 mulheres/56 cargos no total (46%). Idade de posse: feminino 48 (RI:42-54) e masculino 43 (RI:36-51,5) anos (p=0,055). Antiguidade docente: feminino, 23 (RI:13,5-29) e masculino, 16 (RI:10-23) anos (p=0,017). A Engenharia Química ocupava a maioria dos cargos de direção (60%), seguida pela Bioquímica (14%) e Bacharelado em Genética (4%). Conclui-se que, ao longo da história da Faculdade, em cada 10 cargos de liderança, 3,2 foram ocupados pelo género feminino, sendo este valor superior nos últimos 25 anos. Porém, nenhuma mulher ocupou o cargo de Reitora nos 65 anos de vida da instituição.

Palavras-chave: Gênero feminino; Taxas de condução; Professores universitários; Idade; Antiguidade docente.

Introduction

Feminist theoretical approaches and gender studies have clarified that inequality between men and women is the result of a socio-cultural construction and not the result of differences in natural capacities (1). Higher education was, precisely, the appropriate context for the reproduction of gender differences, being for more than a century the exclusive space for the professional training of men, which has now ceased to be so, in line with current social dynamics (1). Public universities in our country are not only central spaces for knowledge and knowledge production, but also the main engines of social mobility and social ascent (2). Despite achieving, on average, higher educational levels than men, women continue to show lower participation in the labor market and, when they do, they are more prone to situations of hourly underemployment and unemployment (3).

In terms of vertical segregation, it is observed that women are promoted to positions of headquarters in a lower proportion than men, although women represent 45.0% of employees, only 30.1 % of the employees who hold leadership positions in the work processes are women (4.5).

Equality between men and women is a fundamental human right, protected by international and national norms and legislation. At the international level, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the United Nations 2030 Agenda for Sustainable Development (6) stand out, which, in its 2023 report, states that it would take 140 years for women to be equally represented in positions of power and leadership in the workplace (7).

Egalitarian ideology is impeded by a primary and principal split in our society; the well-known private life/ public life dichotomy and the fact that women have access public life without being able to abandon the material and psychological burdens of private life, finding it more difficult both to access and to integrate into groups of power and academic influence (8).

Belonging to the academic world means being part of a system of prestige and power that particularly hierarchizes the professional work of its subjects.

The percentages of female scientists are always significantly lower than those of their male peers; the recognition and awards given to female scientists are infinitely less numerous and important than those given to their male peers. In addition, women are also numerically underrepresented in the hierarchical structures of scientific bodies worldwide (9).

Although it was in the academic field where the concept and perspective of gender and where most research using this perspective is generated, higher education institutions have not necessarily embraced the issue to develop changes within the institutions, which may explain the unequal situation that continues to be observed in these working spaces (10).

Data from 136 accredited medical schools in the USA show that only 15% of deans are women and 18% in the role of vice deans. Women are more often employed in positions focused on education and mentoring, but not in those related to corporate and political strategy, finance or government relations (11).

Times Higher Education magazine reports that, among the best universities in the world, those led by women have increased for the first time in three years, but still represent less than one-fifth of the main institutions (12). In a crosssectional study conducted at the Faculty of Medicine of the University of Buenos Aires, when analyzing the distribution of teaching positions by gender, there is little female representation in the highest positions associated with academic recognition, decisión-making and higher salaries (13).

The concrete practices of creating a protocol, mainstreaming the gender approach and training are the actions that are establishing a new institutional and social order in universities. Progress still needs to be made in the parity of participation of university governing bodies and in decision-making spaces (14).

The achievement of effective equality between women and men in our society requires public policies that directly affect gender inequalities and, in order to do so, it is essential to have the necessary and sufficient information to highlight them.

If inequality is not visualized and quantified, it is not perceived as a problem and, therefore, the need to intervene on it is not appreciated.

Objectives

General Objective

To know the role played by the female gender in leadership positions in the Faculty of Exact, Chemical and Natural Sciences (FCEQyN) of the National University of Misiones (UNaM) since its creation until December 2022.

Specific Objectives

1-To evaluate the evolution of the composition of the FCEQyN faculty by gender from its creation up to and including the year 2022.

2-To determine the distribution by gender of the graduates of the FCEQyN undergraduate programs from its creation up to and including the year 2022.

3. To analyze the distribution according to gender, age, teaching seniority and degree of the teachers who served in leadership positions within the FCEQyN as Dean, Vice Dean and the Secretariats: Academic, Research, Development and Innovation, Extension and Technological Linkage, Postgraduate and Nursing School Management.

Materials and Methods

The School of Exact, Chemical and Natural Sciences is located at 1552 Félix de Azara Street in the city of Posadas. It offers 4 undergraduate courses, 3 doctoral degrees, 4 specialties, 6 master's degrees and the following undergraduate courses: Biochemistry, Pharmacy, Food Engineering, Chemical Engineering, Chemical and Bromatological Analysis, Nursing, Genetics, Biology, Information Systems, Biology, Physics, Mathematics and Computer Science.

Regarding the historical background, on April 16, 1973, National Law No. 20,286 was enacted, creating the National University of Misiones. The School of Exact, Chemical and Natural Sciences was created in 1974, being its closest antecedent the School of Chemical Engineering, created on August 6, 1957 and depending on the Northeast National University (https://www.fceqyn.unam.edu.ar/facultad/historia/).

On November 17, 1980, the School of Chemical Engineering of the National University of Misiones became the School of Exact, Chemical and Natural Sciences.

Faculty

Teachers are primarily responsible for fulfilling the actions that the University plans and executes to achieve its objectives. Their specific tasks are the integral formation of students, research, intellectual creation and extension. And when applicable, they are also concerned with the participation in the governing functions of the UNaM and any of its academic units and/or dependencies, in accordance with the provisions of the current Statute (https://www.unam.edu.ar/images/documentos/estatuto_unam.pdf).

Methodology

In order to obtain the gender profile of the graduates of the different undergraduate courses that make up the Faculty of Exact, Chemical and Natural Sciences, the data were obtained by using the SIU Wichi system with data from the SIU Guarani Academic Management Information Cubes, provided by the Department of Informatics and Communications of FCEQyN.

To know the distribution by gender, age, teaching seniority and degree of the individuals who served in leadership positions within the Faculty, we analyzed the election periods and direct appointments from 1973 to 2022 inclusive.

The data on the designations of authorities were extracted from the books of Provisions and Resolutions in the Human Resources Department of this institution.

Once the list of teachers who participated in the leadership positions had been drawn up, the data on gender, age, teaching seniority and degree were obtained from the Faculty Records Office.

For the authorities that exercised their functions before the creation of the UNaM, the data published in the Faculty of Chemical and Natural Sciences/UNaM/1957-2007, 50 years of history, were considered. It was a produced by the Social Communication career of the Faculty of Humanities and Social Sciences, with Professor Liliana Maya as the responsible editor. The data published in the digital book FCEQyN were also used.

A history under construction (https://www.fceqyn.unam. edu.ar/fceqyn-libro-historia/), developed by Dr. Luz Irene Pyke and the communicators Lara Schwieters and Miguel Riquelme, from the FCEQyN Communication program.

Variables analyzed

The data corresponding to categorical variables (gender, function and degree) were recorded according to what was reported by each teacher in his or her file, resulting in a dichotomous variable for gender and a polytomous variable for the remaining variables. They are described by means of bar graphs, and the proportions of the dichotomous variables are also expressed. In the case of the age variable, it was obtained by the difference between the date of birth and the date of access to the position or function, being recorded in years fulfilled, as a discrete quantitative variable. Teaching seniority was recorded as a discrete variable and corresponds to the difference between the year of admission to the institution and the year in which the position was taken up. The Mann Whitney test was used to compare medians between genders, with a statistical significance level p <0.05.

Results and Discussion

1-Evolution of the composition of the FCEQyN faculty according to gender since its creation until 2022 inclusive.

Table 2 presents data on the gender composition of the teaching staff of FCEQyN faculty since its creation. In order to interpret this table, we must point out several important events in the history of this institution that was born as the School of Chemical Engineering in 1957.

In 1974, the Biochemistry career was created and, in 1978, the Industrial Chemical Laboratory. The School of Nursing, created in 1974 under the Rector's Office, became dependent on the FCEQyN 1980. In 1985, the School of Pharmacy was created and the careers of Professor of Biology and Bachelor of Genetics were transferred from the School of Humanities and Social Sciences. In 1995, Mathematics and Physics Teaching became part of the faculty. In 2003, the Bachelor's Degree in Information Systems was created in the city of Apóstoles, under the FCEQyN. Ok The Chemical and Bromatological Analysis career was created in 2004 and the Food Engineering degree in 2007. Finally, in 2014, the University Professor's Degree in Computer Science was created at the Apóstoles campus. **Table N° 1:** Evolution of the teaching staff of the Faculty of Exact, Chemical and Natural Sciences and its distribution by gender according to year of evaluation.

| Year | Total teachers | Female teachers | Male teachers | |
|--|----------------|-------------------------|-------------------------|--|
| 1960-1966 (*) | 45 | 2 (4%) | 43 (96%) | |
| 1980 (Resolution 1349/80 Rector's Office) [School of Nursing] | 141 [21] | 48 (34%) [16 (76%)] | 93 (66%) [5 (24%)] | |
| 2004 (Computer science - Rector's Office) [School of Nursing] | 316 [33] | 164 (52%) [17 (52%)] | 152 (48%) [16 (48%)] | |
| 2022 (Computer science - Rector's Office) [School of Nursing] | 462 [66] | 277 (60%) [45 (68%)] | 185 (40%) [21 (32%)] | |
| (*) Source: Faculty of Chemical and Natural Sciences/UNaM/1957-2007. Note: Nursing School values are included in the totals since 1980. | | | | |

Table 1 shows that at the beginning of the creation of the FCEQyN, there is a large predominance of the male gender (96%), which declines over the years until reaching 40% in the year 2022. This could be explained by the incorporation from 1974 of careers belonging to health sciences, which have a gender distribution with predominance of female gender.

2-Gender distribution of graduates from FCEQyN undergraduate programs since its creation.

| Table 2: Total number of graduates of the Faculty of Exact, Chemical |
|--|
| and Natural Sciences and their distribution according to gender and |
| degree career, from its creation to December 2022. |

| Undergraduate Career | Total Number of Graduates | Female Graduates | Male Graduates |
|--|------------------------------|---------------------|------------------|
| Biochemistry | 553 | 426 (77%) | 127 (23%) |
| Pharmacy | 812 | 594 (73%) | 218 (27%) |
| Food Engineering | 72 | 54 (75%) | 18 (25%) |
| Chemical Engineering | 483 | 175 (36%) | 308 (64%) |
| Bachelor's Degree in Chemical and Bromatological Analysis | 7 | 6 (86%) | 1(14%) |
| Bachelor's Degree in Nursing | 550 | 443 (81%) | 107 (20%) |
| Bachelor's Degree in Genetics | 953 | 573 (60%) | 380 (40%) |
| Bachelor's Degree in Information Systems | 62 | 12 (19%) | 50 (81%) |
| Professor of Biology | 168 | 132 (79%) | 36 (21%) |
| University Professor in Biology | 11 | 7 (64%) | 4 (36%) |
| Professor of Physics | 35 | 15 (43%) | 20 (57%) |
| Professor of Mathematics | 261 | 166 (64%) | 95 (36%) |
| University Professor in Computer Science | 25 | 13 (52%) | 12 (48%) |
| Total | 3992 | 2616 (66%) | 1376 (34%) |
| Source: Information | Fechnology and Corr | munications Area | a of the FCEQyN. |

We can observe that in most of the undergraduate programs there is a predominance of the female gender. The exceptions are the Bachelor's degrees in Information Systems, Chemical Engineering and Physics.

Currently, there is greater access of women to higher education, however, this situation has been called an 'illusory advantage'. Although there is greater access to higher education, women are underrepresented in science, engineering, mathematics and technology disciplines, which are precisely the fields in which job opportunities are increasing, while they are overrepresented in feminized careers linked to caregiving (15).

This situation has an impact on wage gaps that translates into women earning lower salaries, where the selection of degrees and fields of study explains between 15 and 25 percent of the difference in earnings between males and females among higher education graduates. Male students continue to choose higher-paying degrees and receive higher earnings after graduation than females (12).

3- Distribution according to gender, age, teaching seniority and degree of teachers who held leadership positions at the FCEQyN.

Gender

Total leadership positions: 117 Male: 80 (68%) Female: 37 (32%)

Therefore, throughout the history of the Faculty, 3.2 out of every 10 leadership positions were held by women.

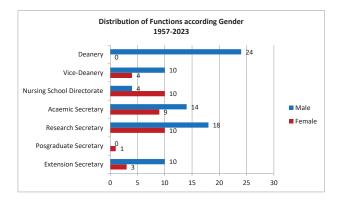


Figure N° 1: Distribution by gender in the different management positions in the School of Exact, Chemical and Natural Sciences since its creation. Source: Own elaboration.

When analyzing the distributions by gender for each management position, the following relationships are observed:

Dean's Office/Delegate Organizer: total. 24, male: 24, female: 0.

No women

Vice Dean's Office: total: 14, male: 10, female: 4.

2.5 times > male/female

Academic Secretary's Office: total: 23, male: 14, female: 9.

1.6 times > male/female

Research Secretariat: total: 28, male 18, female: 10.

1.8 times > male/female

Extension Secretariat: total: 13, male: 10, female: 3.

3.3 times > male/female

Postgraduate Secretariat: total: 1, male: 0, female 1.

Newly created, 1 position only, 1 female

School of Nursing Management: total: 14, male: 4, female: 10.

2.5 times > female/male.

Engineer Félix Salvador Tabbia was the first Organizing Delegate (1958), Engineer Alfredo González was the first Dean appointed by the National Executive Power (1970) and Engineer Antonio Barón Viana was the first Dean appointed by the Rector of the UNaM (1973) (See Annexes).

At the national level, the report on Women in the Argentine University System, published by the Secretariat of Public Policies of the National Ministry of Education, states that in 2022, 39% of the Dean positions were held by women (16). However, in the 65-year history of the FCEQyN, no woman has served as Dean.

If we make a cut to the 25 years of creation of the National University of Misiones, we will have 2 periods, 1957-1997 and 1998-2022 inclusive. When analyzing the distribution by gender, we observe the following relationships:

Period 1957-1997: out of a total of 62 positions, 11 were occupied by the female gender (18%). Period 1998-2022 inclusive: out of a total of 55 positions, 26 were held by women (47%). In other words, if we consider the first period of life of the institution, every 10 positions of leadership, 1.8 were occupied by the female gender; while, in the last period it was 4.7.

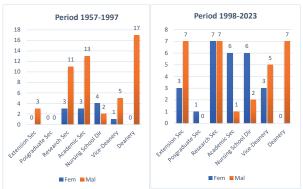


Figure N° 2: Comparison of the distribution by gender according to periods (1957-1997 vs. 1998-2022 inclusive) in leadership positions at the FCEQyN. Source: own elaboration.

In general, there has been an increase in the frequency of women occupying managerial positions in the last 25 years in our Faculty. At present, out of the 7 leadership positions, 4 are held by women. The predominance of the male gender in the early years is understandable because of the largely male composition of the teaching staff.

Of the leadership positions analyzed, the one in which there is a marked increase in the number of women is in the Academic Secretary's Office.

One plausible explanation is that in the early years, the majority of those who worked in this position were chemical engineers, most of whom were male; while during the last 25 years, we have also found biochemists, genetics graduates and mathematics or education science professors, careers in which the female gender predominates.

Regarding this last point, Del Rosal points out that women in the university usually occupy positions related to care tasks, or where the needs of students and teachers are managed, such as academic secretariats. This could reinforce and reproduce gender differences in terms of the appointment of higher authorities, women in care-related positions and men in more executive positions (17).

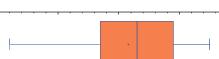
When analyzing the data from the Research Secretariat; in August 2022, 104 research projects were in force. Of the 104 project directors, 70 were female (67%) and 34 were male (33%). However, when analyzing the distribution by gender in the leadership positions of this secretariat, out of a total of 28 directors since its creation in 1983 up to and including 2022, 18 were men (64%) and 10 were women (36%), i.e., the proportions are reversed.

The high proportion of women in higher education does not translate into a greater presence in research. Gender differences in academic publication rates remain and are more marked in high-level journals. During the first wave of confinements due to COVID-19, although submission of scholarly papers for publication increased, this growth was much slower for female researchers, and was especially noticeable among younger cohorts of female academics (12).

The majority of the female gender in leadership positions in the School of Nursing is explained by the composition of the graduates in the undergraduate career, where 81% are women, a career that, from its historical beginnings, was associated with tasks assigned to the role of the female gender, such as the care of the elderly and the sick.

Age

It was observed that the female gender assumed the driving position at a higher age 48 (RI: 42-54) years than the male gender 43 (RI: 36-51.5) years. Although the differences are not statistically significant, they are very close to being so (p=0.055).



AGE comparison by GENDER

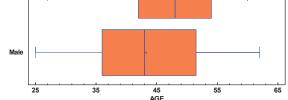


Figure N° 3: Comparison of the average age at taking office according to gender for all the authorities of the Faculty of Exact, Chemical and Natural Sciences. Source: Own elaboration.

Table 3 shows the average age of the teachers according to the function they performed when they assumed the leadership positions. We can observe that the position of Academic Secretary is the one with the lowest average age, 32 (RI: 30-51), where the youngest assumed at 25 years of age.

Table N° 3: Age of the authorities of the Faculty of Exact, Chemical and Natural Sciences when assuming the leadership position by category.

| LEADERSHIP POSITION | n | Median (Interquartile Range) | Minimum | Maximum |
|-------------------------------|----|---------------------------------|---------|---------|
| Dean's office | 19 | 45 (37-52) | 30 | 60 |
| Vice Dean's Office | 14 | 46,5 (43-51) | 31 | 59 |
| Academic Secretary | 23 | 32 (30-51) | 25 | 56 |
| Research Secretary | 28 | 48 (40-52) | 32 | 62 |
| Extension Secretary | 13 | 44,5 (40-48,5) | 31 | 56 |
| Graduate Secretary | 1 | 59 | 59 | 59 |
| Director School of Nursing | 14 | 41 (35-51) | 32 | 60 |

Source: Own elaboration

Teaching seniority

With respect to teaching seniority, the female sex assumed the position of head teacher with more years of experience than the male sex, 23 (IR: 13.5-29) versus 16 (IR: 10-23) years. In this case the differences were statistically significant (p=0.017).

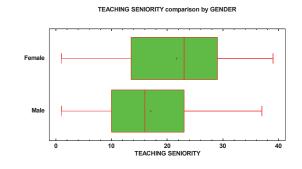


Figure Nº 4: Comparison of the average teaching seniority at the time of taking office as a function of gender for all the authorities of the Faculty of Exact, Chemical and Natural Sciences. **Source:** Own elaboration.

When comparing teaching seniority according to management position, the figure of the Academic Secretary is again the one with the least number of years of experience.

| LEADERSHIP POSITION | n | Median (Interquartile Range) | Minimum | Maximum |
|-------------------------------|----|---------------------------------|---------|---------|
| Dean's office | 19 | 20 (10-28) | 4 | 36 |
| Vice Dean's Office | 14 | 19,5 (15-29) | 7 | 39 |
| Academic Secretary | 23 | 10 (7-24) | 1 | 34 |
| Research Secretary | 28 | 18 (14-26) | 6 | 37 |
| Extension Secretary | 13 | 17 (12,5-24) | 4 | 34 |
| Graduate Secretary | 1 | 36 | 36 | 36 |
| Director School of Nursing | 14 | 22 (14-23) | 1 | 37 |
| | Sc | ource: Own elaboration | | |

 Table 4: Seniority of teachers when assuming the position of head of the authorities of the Faculty of Exact, Chemical and Natural Sciences.

The last two variables analyzed, age and teaching seniority, show that women generally assume the leadership role at an older age and after several years of teaching.

The causes of these findings should be analyzed in further research. Klenk points out that conducting teacher surveys on a regular basis are especially useful for understanding the root causes of gender inequalities, beyond their appearance (18).

Degree

When observing the distribution of all management positions according to the degree, the Chemical Engineering degree is the most frequent. Of the 117 total management positions, 70 were held by Chemical Engineers, representing 60% of the total, followed by Biochemists (14%) and Geneticists (4%).

The fact that chemical engineers were the most frequent in all management positions can be explained by the fact that the School of Exact Sciences was founded as the School of Chemical Engineering, with the incorporation of the rest of the careers that currently belong to this institution.

In the period 1957-1997, out of a total of 62 positions, 46 were occupied by Chemical Engineers (74%), while in the period 1998-2022, there were 24 out of a total of 55 (44%). This also reflects the incorporation of other careers in the last period of the institution's life.

Women Chemical Engineers have held management positions more frequently in recent years. In the period 1957-1997, of the 46 management positions held by Chemical Engineers, 5 were women (11%), while in the period 1998-2022, there were 8 out of a total of 24 (33%). It should be noted that the frequency of female Chemical Engineering graduates also increased over the years, 19% in the first period versus 46% in the last. (Source: FCEQyN

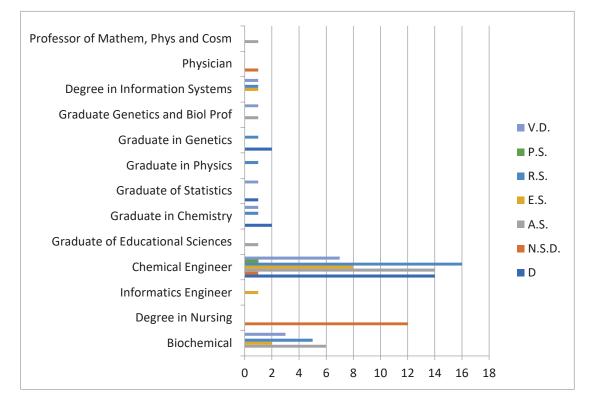


Figure N° 5: Degree title according to function in management positions of professors at the Faculty of Exact, Chemical and Natural Sciences. Additional information: VD: Vice Dean's Office SP: Postgraduate Secretariat SI: Research Secretariat SE: Extension Secretariat SA: Academic Secretariat DEE: School of Nursing Directorate D: Dean's Office / Organizing Delegate Source: Own elaboration.

Area of Informatics and Communications).

Conclusions

Since its creation in 1957, in the Faculty of Exact, Chemical and Natural Sciences, 3.2 out of every 10 leadership positions were held by women, higher in the last 25 years, 4.6 versus 1.8. However, no woman has held the position of Dean in the 65 years of the institution's existence. The female gender assumes the leadership position with greater teaching seniority than the male gender and most of the leadership positions were held by Chemical Engineers.

It is important that universities regularly collect and publish data on gender parity in leadership positions, since failure to do so contributes to making the problem invisible in an institution that is a social reference.

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- 16. Mujeres en el Sistema Universitario Argentino: 2019-2022. Informe de la Secretaría de Políticas Universitarias. Ministerio de Educación de la Nación Argentina. https://www.argentina.gob.ar/sites/default/files/2020/04/mujeres_en_el_sistema_universitario_argentino_- estadisticas_2021-2022.pdf (fecha de consulta: 18/04/2023)
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Annexes

List of authorities of the faculty of exact, chemical and natural sciences of the unam, since its creation

| Admission | Ó₹D€DGÓÖ | Designation |
|------------|---|------------------------------|
| 1958 | TABBIA, Félix Salvador (Organizing Delegate) | * |
| 1966 | LEUMAN, Julio Cesar (Organizing Delegate) | * |
| 1967 | GOTTSCHALK, Alfredo (Organizing Delegate) | * |
| 1969 | URSINI, Augusto Federico (Organizing Delegate) | * |
| 1970 | VEGLIA, Juan F (Organizing Delegate) | * |
| 26/11/1970 | GONZALEZ, Alfredo | Dto PEN Nº 2371/70 |
| 18/06/1973 | VIANA, Antonio Barón (Controller Delegate) | Res Rect Nº 001/74 |
| 15/10/1976 | BRUNO, Omar Adolfo | Res MEN Nº 1729/76 |
| 10/05/1978 | BENASSI, Fernando Olivio | Dto PEN Nº 2278/78 |
| 02/09/1982 | RUSSO, Héctor Ramón | Res MEN Nº 1593/82 |
| 13/01/1984 | GALIAN, Carlos Emilio (Normalizing Dean) | Res MEN Nº 077/84 |
| 01/05/1986 | KANZIG, Rodolfo Guillermo | Res CD Nº 001/86 |
| 19/05/1987 | VON KNOBLOCH, Roberto Ignacio | Res CD Nº 009/87 |
| 23/04/1990 | DELFEDERICO, Luis Esteban | Res CD Nº 026/90 |
| 09/06/1994 | PETRYLA, Estanislado Juan | Res CD Nº 060/94 |
| 24/05/1996 | MARUCCI, Raúl Salomón | RES CD Nº 175/96 |
| 04/10/1996 | GALIAN, Carlos Emilio | Res CD Nº 046/96 |
| 01/06/1998 | SCHWIETERS, Horacio Héctor Gustavo | Res CS Nº 017/98 |
| 08/07/2002 | LINARES, Andrés Ramón | Res JEC Nº 060/02 |
| 14/06/2006 | LINARES, Andrés Ramón | Res JEC Nº 048/06 |
| 05/07/2010 | KRAMER, Fernando Luis | Res JEC Nº 004/10 |
| 02/07/2014 | MARTI, Dardo Andrea | Res JEC Nº 004/14 |
| 06/07/2018 | BRUMOVSKY, Luis Alberto | Res JEC Nº 012/18 |
| 06/07/2022 | MARTI, Dardo Andrea | Res JEC Nº 016/22 |
| | *Publication "Faculty of Exact, Chemical and Natural Sciences UNaM/1957-2007, 50 years of f de Ciencias Exactas Químicas y Naturales/UNaM/1957-2007, 50 años de histor It mentions that the first Organizing Delegate of the School of Chemical Engineering was Eng however, it was not until August 10, 1960 that the School became the School of Chemica Source: Own elaboration. | ia". jineer Mario Villar; |

| ADMISSION | VICE DEAN'S OFFICE | DESIGNATION |
|------------|--|-----------------------------|
| 03/12/1970 | PASTOR, Silvio Alcides | * |
| | 1973-1982 There was no Vice Dean | · · |
| 08/11/1982 | GALIAN, Carlos Emilio | Res Rec Nº 770/82 |
| | 13/01/1984-30/04/1986 There was no Vice Dean | |
| 01/05/1986 | MENDEZ, Nilda Isabel | Res CD Nº 001/86 |
| 01/09/1987 | MARTINEZ VAZQUEZ, Francisco | Res CD Nº 028/87 |
| 07/05/1990 | SCHWUITER, Horacio Héctor Gustavo | Res CD Nº 033/90 |
| 01/05/1994 | MARUCCI, Raúl Salomón | Res CD Nº 047/94 |
| 01/06/1998 | ENRIQUE, Pedro | Res CS Nº 017/98 |
| 08/07/2002 | KOLB KOSLOBSKY, Nicolás | Res JEC Nº 060/02 |
| 14/06/2006 | YAJIA; Marta Esther | Res JEC Nº 048/06 |
| 05/07/2010 | VIALEY, Mario Ramón | Res JEC Nº 004/10 |
| 01/12/2011 | QUIROGA, Marina Inés | Res JEC Nº 302/11 |
| 02/07/2014 | HERRERA, José Luis | Res JEC Nº 004/14 |
| 06/07/2018 | MARINELLI, Marcelo Julio | Res JEC Nº 002/18 |
| 06/07/2022 | GRENON, Sandra Liliana | Res JEC Nº 016/22 |
| | *Publication "Facultad de Ciencias Exactas Químicas y Naturales/UNaM/1957- Source: own elaboration. | 2007, 50 años de historia". |

| Admission | Academic Secretary | Designation |
|------------|---|-----------------------|
| 27/05/1970 | GONZALEZ, Alfredo | Res Nº 786/70 * |
| 09/02/1971 | DELFEDERICO, Luis Esteban | Res Nº 018/71 |
| 18/06/1973 | KANZIG, Rodolfo | Res Nº 001/73 |
| 28/04/1975 | NUNEZ VELLOZO, Carlos Alfredo | Res Nº 037/75 |
| | 28/09/1976-11/06/1978 There was no Academic Secretary | |
| 12/06/1978 | KOLB KOBLOSKY, María | Disp Nº 084/78 |
| 01/09/1980 | JEJER, Carlos Segismundo | Disp Nº 163/80 |
| 08/11/1982 | PETRYLA, Juan Estanislao | Disp Nº 231/82 |
| 01/02/1984 | GONZALEZ, Rudy Ester | Disp Nº 017/84 |
| 01/11/1984 | NOVO, Manuel Antonio | Disp Nº 385/84 |
| 20/08/1985 | JEJER, Carlos Segismundo | Disp Nº 269/85 |
| 01/02/1986 | PASAMAN ZNAKOVSKI, Juan | Disp Nº 013 bis/86 |
| 25/07/1986 | ALBANI, Oscar Alfredo | Disp Nº 092/86 |
| 12/06/1987 | MARQUEZ, Nora Graciela | Disp Nº 249/87 |
| 02/07/1990 | GONZALEZ, Carlos Oscar | Res CD Nº 066/90 |
| 13/05/1994 | ROMERO LEGUIZAMON, Anastasio Saturnino | Res CD Nº 336/94 |
| 01/08/1996 | YAMASIRO, José Luis | Disp Nº 294/96 |
| 01/06/1998 | HASSEL, Enrique Hermann | Disp Nº 285/98 |
| 08/07/2002 | YAJIA, Marta Esther | Disp Nº 381/02 |
| 24/07/2006 | SKLEPEK, Graciela Ester | Disp Nº 649/06 |
| 08/07/2010 | VALDEZ AMARILLA, Eusebia Concepción | Disp Nº 829/10 |
| 01/08/2014 | GANDUGLIA, Mirtha Ramona | Disp Nº 1107/14 |
| 01/08/2018 | VEDOYA, María Celina | Disp Nº 1001/18 |
| 06/07/2022 | MENDEZ, Claudia Marcela | Disp Nº 999/22 |
| | *Publicatión "Facultad de Ciencias Exactas Químicas y Naturales/UNaM/1957-2007, Source: Own elaboration. | 50 años de historia". |

| ADMISSION | RESEARCH SECRETARIAT | DESIGNATION |
|----------------|--|------------------------------|
| 1983- CREAT | ON OF THE CENTER FOR RESEARCH AND TECHNOLOGICAL DEVELOPMENT (CIDET) | (Disp N ^a 114/83) |
| 20/04/1983 | STAMPELLA, Rogelio Santos | Disp Nº 114/83 |
| 08/07/1983 | KANZIG, Rodolfo Guillermo | Disp Nº 249/83 |
| 27/09/1985 | RUSSO, Héctor Ramón | Disp Nº 327/85 |
| 1987-sept 1988 | DELFEDERICO, Luis Esteban | * |
| 11/10/1988 | SCHEVEZOV, Carlos Enrique | Disp Nº 455/88 |
| 09/10/1989 | SCHMALKO, Miguel Eduardo | Disp Nº 407/89 |
| 24/09/1990 | AREA, María Cristina | Disp Nº 328/90 |
| 02/07/1991 | SCHMALKO, Miguel Eduardo | Disp Nº 239/91 |
| 03/12/1991 | PETTRI FLORES, María Diora | Disp Nº 617/91 |
| 22/06/1993 | SCHMALKO, Miguel Eduardo | Disp Nº 301/93 |
| 28/10/1993 | PETTRI FLORES, María Diora | Disp Nº 729/93 |
| 17/11/1994 | STAMPELLA, Rogelio Santos | Disp Nº 881/94 |
| 20/10/1995 | STAMPELLA, Rogelio Santos | Disp Nº 539/95 |
| 09/12/1997 | STAMPELLA, Rogelio Santos | Disp Nº 036/98 |
| 25/04/2000 | TONON, Sergio Andrés | Disp Nº 147/00 |
| 04/05/2001 | LINARES, Ramón Andrés | Disp Nº 149/01 |
| 23/04/2002 | PETTRI FLORES, María Diora | Disp Nº 131/02 |
| 04/09/2002 | ARGÛELLO, Beatriz del Valle | Disp Nº 518/02 |
| 03/05/2005 | SCHMALKO, Miguel Eduardo | Disp Nº 323/05 |
| 24/05/2007 | VILLALBA Laura Lidia | Disp Nº 658/07 |
| CREAT | ON OF THE SECRETARIAT FOR RESEARCH AND POSTGRADUATE PROGRAMS (Disp f | N ^a 067/08) |
| 13/03/2008 | QUIROGA, Marina Inés | Disp Nº 067/08 |
| 08/07/2010 | VILLALBA, Laura Lidia | Disp Nº 828/10 |
| 01/02/2013 | MARTI, Dardo Andrea | Disp Nº 066/13 |
| 01/08/2014 | VEDOYA, María Celina | Disp Nº 1175/14 |
| 01/08/2018 | KUNA, Horacio Daniel | Disp Nº 1000/18 |
| 01/10/2020 | FERRI, Cristian Alberto | Disp Nº 783/20 |
| 01/03/2021 | ARES, Alicia Esther | Disp N° 099/21 |
| 202. | 2-DEDOPLEMENT OF THIS SECRETARIAT INTO THE SECRETARIAT FOR POSTGRADUA SECRETARIAT FOR RESEARCH, DEVELOPMENT AND INNOVATION (Disp No. 1373/2 | |
| | SECRETARIAT FOR RESEARCH, DEVELOPMENT AND INNOVATION | |
| 01/08/2022 | DESCHUTTER, Enrique Jorge | Disp Nº 1030/22 |
| | POSTGRADUATE SECRETARY | |
| 01/08/2022 | SCIPIONI, Griselda Patricia | Disp Nº 1046/22 |
| | *This information is not available. Only acceptance of resignation (Disp 383/88) Source: own elaboration. | |

As background, we should mention the creation of the Center for Graduate Studies (Res CD N° 063/93), with Dr. Rogelio Santos Stampella as its first Director. Also, in September 1998, the Project for the creation of the new structure - Management Level - of the Faculty was approved, where the Secretariat of Research and Postgraduate Studies was created (Res CD N° 119/98), which was in force until November 2001, with Dr. Carlos Enrique Schvezov as its first Secretary.

| Admission | Extension Secretary | Designation |
|------------|--|------------------|
| | 1990-APPROVAL OF THE PROPOSAL FOR THE CREATION OF THE SECRETARIA EXTENSION AND STUDENT GRADUATE PROBLEM (Res CD N°064/90) | AT OF |
| 30/07/1990 | MATIAUDA, Mario | Res CD Nº 071/90 |
| 13/05/1994 | MATIAUDA, Mario | Disp Nº 052/94 |
| 01/08/1997 | HASSEL, Enrique Hermann Arturo | Disp Nº 331/97 |
| 01/06/1998 | GALIAN, Carlos Emilio | Disp Nº 297/98 |
| 1998-0 | REATION OF THE SECRETARIAT OF EXTENSION AND TECHNOLOGICAL LINKAGES (I | Res CD № 119/98) |
| 15/07/2002 | HERRERA, José Luis | Disp Nº 401/02 |
| 07/07/2006 | HERRERA, José Luis | Disp Nº 650/06 |
| 01/03/2007 | GALIAN, Carlos Emilio | Disp Nº 052/07 |
| 01/05/2010 | QUIROGA, Marina Inés | Disp Nº 461/10 |
| 08/07/2010 | ZAPATA, Pedro Darío | Disp Nº 831/10 |
| 01/08/2014 | SURKAN, Sergio Alejandro | Disp Nº 1108/14 |
| 01/06/2017 | CABALLERO, Sergio Daniel | Disp Nº 748/17 |
| 06/07/2018 | BROUSSE, María Marcela | Disp Nº 986/18 |
| 01/03/2023 | RAMBO, Alice Raquel | Disp Nº 252/23 |
| | Source: Own elaboration. | |

| Admission | Nursing School Management | Designation |
|------------|---------------------------------------|------------------|
| 23/12/1974 | DE LA VEGA, Rodolfo Hipólito | Res R-Nº 349/74 |
| 01/09/1975 | CAIMI, Nydia Haydee Natividad | Res R Nº 714/75 |
| 27/04/1984 | GALIAN, Carlos Emilio | Ord R-Nº002/84 |
| 27/08/1987 | VELAZQUEZ DE SANCHEZ, Hilda Aurora | Res CD Na 027/87 |
| 07/05/1990 | MONTENEGRO, Gloria Marcelina | Res CD Nº 036/90 |
| 13/05/1994 | MONTENEGRO, Gloria Marcelina | Res CD Nº 055/94 |
| 01/06/1998 | POISSON DE MEDINA, Ivonne María Reneé | Disp Nº 290/98 |
| 08/07/2002 | GRITTIS DE CARDOZO, Rosa Beatriz | Disp Nº 393/02 |
| 01/07/2006 | VELAZQUEZ DE SANCHEZ, Hilda Aurora | Disp Nº 663/06 |
| 08/06/2010 | VELAZQUEZ DE SANCHEZ, Hilda Aurora | Disp Nº 833/10 |
| 07/07/2014 | PRYSIAZNIY, Susana Beatriz | Disp Nº 1090/14 |
| 28/11/2017 | CARDOZO, Delia Paciela | Disp Nº 2009/17 |
| 06/07/2018 | NISKANEN, Héctor Alfredo | Disp Nº 987/18 |
| 06/07/2022 | AVALOS, José Luis | Disp Nº 992/22 |
| | Source: Own elaboration. | |