

# 2019 GENDER BUDGET



**POLITECNICO**  
MILANO 1863

# 2019 GENDER BUDGET

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This is a concise edition of the “2019 Gender Budget”.  
The full and detailed version is downloadable as PDF file at the following link:  
<https://www.polimi.it/en/the-politecnico/about-polimi/>

## FOREWORD

*It is an undeniable fact that, even today, the word “diversity” often has a negative meaning in common speech. Something “different” tends to be considered foreign and, worse still, people are often disinterested in it.*

*However, we are convinced that the time has come to reverse this trend, and to consider diversity a value. We say this as engineers - men and women of science - and as the people who lead one of the country’s most prominent cultural institutions: there would never be a discovery if researchers were to think inside the box. The lack of differences between us researchers would considerably limit our capacity to imagine new solutions.*

*Whatever the angle chosen to analyse the issue, diversity is an asset because comparison and discussion generate new occasions and unexpected opportunities. We are referring to cultural difference as the expression of an open and international university that welcomes students and professors from all parts of the world. We consider difference as the convergence of knowledge acquired in fields of study that have, to date, been kept apart (it is no mere chance that research programmes and teaching methods are becoming increasingly multidisciplinary). Then, let us not neglect the growing integration of humanistic and scientific aspects in response to challenges posed by artificial intelligence, big data and augmented reality.*

*The gender issue is equally important, and we are very sensitive to this topic at the Politecnico di Milano. We feel deeply about it; hence, we want to overcome mistrust and encourage girls to enrol in undergraduate STEM (Science, Technology, Engineering and Mathematics) degrees. We shall do our utmost to provide our researchers and consultants with effective support to reconcile family life and professional growth. Indeed, gender equality is an essential growth factor, not only in our university, but also within a genuinely sustainable European economy that generates well-being and pursues both progress and social cohesion.*

*There are also many more or less visible facets of human life and thinking that define the meaning of “different”, including religious beliefs, sexual orientation, disability and other aspects. Hence, in 2018, we created POP, Pari Opportunità Politecniche (Politecnico Equal Opportunities). Several companies and institutions have already joined this programme to ensure inclusive study and working environments. Starting from gender identity, POP is organised along five lines of action. It is not a slogan but a practically implemented initiative, and so is this first Gender Budget. It is not a required procedure but a genuine commitment to do more and better.*

*Politecnico di Milano is moving in this direction - this is not empty rhetoric - with its typical practical approach by launching projects that take shape daily, and which are measured and validated. Indeed, only by testing our own limits can we identify and acknowledge them, and only by acknowledging our limits can we overcome them.*

**Ferruccio Resta**  
Rector

**Donatella Sciuto**  
Vice Rector

A woman with long, wavy red hair, wearing a black long-sleeved top and black pants, is standing in front of a chalkboard. She is holding a piece of chalk and appears to be writing or drawing on the board. The chalkboard contains several mathematical diagrams and equations. On the left, there is a coordinate system with a curve and the equation  $r = a \cos 3\theta$ . In the center, there is a diagram of a circle with a vertical line passing through its center, and a horizontal line below it. To the right of the circle, there is a vertical line labeled 'f' and a horizontal line labeled 'x'. The background is a plain white wall.

**Politecnico di Milano wants  
to be a driving force promoting  
research and innovation  
focused on societal needs  
and individual requirements.**

## VISION

We are an international university,  
open to interaction, and we reward merit  
and talent without any gender-related considerations.

Politecnico di Milano is a scientific-technological university that trains architects, designers and engineers. Among the foremost institutions in Europe and in the world, it is aware of the important **social and educational function** it is called to perform. Hence, it views a conduct of responsibility and integrity, respect and equality, between genders as well, and transparency as essential values to achieve its institutional purposes. This is the image of an open and multicultural university that looks to the future, capable of being ahead of times and of anticipating needs, willing to establish a dialogue, attentive to an inter-disciplinary approach, a participant in the major social transformations underway. A community that values diversity, talent, commitment and participation.

### POP - PARI OPPORTUNITÀ POLITECNICHE (POLITECNICO EQUAL OPPORTUNITIES)

Pursuant to this vision, POP, Pari Opportunità Politecniche (Politecnico Equal Opportunities) was established in 2018. Through POP, the Politecnico undertakes to ensure a study and work environment that respects and values gender identities, and different skills, cultures and origins. The project unfolds along **five lines of action**: gender identity, inter-cultural, national and religious differences, diversity of sexual orientation, disability and psychological well-being. The focus on gender equality is achieved through **Gender POP**, whose aim is to attract girls to STEM studies, ensure female students have a welcoming environment that supports them during the study programmes, and to assist female PhD students and researchers during their professional path through support and training actions.

### CUG - GUARANTEE COMMITTEE

Politecnico di Milano's Guarantee Committee participates in this university vision through its main functions of promoting the culture of gender equality and equal opportunities, while respecting the dignity of the person and organisational well-being, with actions addressed at the student population, professors and technical-administrative staff. It is a joint body, currently in office for the three-year period 2019/2021. Together with the Confidential Counsellor and the counselling service desk on work-related discomfort, it undertakes actions combating any form of discrimination founded on sex and sexual orientation, race, ethnic origin, religion, personal and political convictions, disability and age.

## INTRODUCTION

Why a gender budget?  
To stop the application of double standards  
in the course of time.

Despite legislative measures and the growing attention to gender issues, recent research conducted by the European Institute for Gender Equality (EIGE), as well as other sectoral studies, show the far-reaching disparity that still prevails between men and women. A serious social limitation that is also economically damaging.

On several occasions, EIGE has stressed that the factual attainment of gender equality, especially in the economic and political sphere, is instrumental to the preservation of a sustainable European economy, the creation of full employment, and the generation of well-being for all citizens. This is an essential condition to pursue the **EU objectives of growth, development and social cohesiveness**. It is therefore crucial to be equipped with analysis and evaluation tools capable of steering public policies, such as gender budgeting, i.e., the draft of public budgets from a gender perspective.

With the first edition of the Gender Budget, Politecnico di Milano takes a **snapshot of the university from a gender viewpoint** with focus on study programmes and graduate employment, faculty and technical-administrative staff. The Gender Budget additionally points out the policies, measures and positive actions adopted and those to be implemented in order to promote equal opportunities, thereby tracing new goals and targets.

### AN OVERVIEW OF THE UNIVERSITY: FOCUS ON THE FEMALE POPULATION\*

**STUDENTS**  
**14.450 WOMEN OUT OF A TOTAL 44.012**

**PROFESSORS**  
**403 WOMEN OUT OF A TOTAL 1.403**

**TECHNICAL - ADMINISTRATIVE STAFF**  
**732 WOMEN OUT OF A TOTAL 1.233**





# ANALYSIS





34%

## FEMALE STUDENTS

*“Nothing in life is to be feared, it is only to be understood.*

*Now is the time to understand more, so that we may fear less.”*

*(Marie Curie)*

Talent, courage, persistence, but also fear and uncertainty ... the girls we meet each day in our classrooms are a blend of emotions. We still have a long way to go, but we can channel these sensations in the right direction. The data collected by the university clearly show the endurance of stereotypes as well as the need to deploy **actions targeting cultural change**.

We must respond to the implicit and explicit prejudices, which along with social and cultural conditioning are among the causes of the small number of women enrolled in Engineering programmes, with actions that strengthen the awareness of their own value and lend increased determination to their choices.

It is clear that there are no specific activities that might change the situation in the short to medium term. The problems associated with women’s scant access to STEM subjects in general, and to technological and engineering ones in particular, require **new models and synergistic efforts** by the institutions over a considerable timespan.

Although **in line with Italian and international universities**, the numbers speak eloquently. They evince that the university has embarked over the years on a dual-speed process towards gender equality in the student population, achieved and exceeded as regards Architecture and Design.

The data collected further point out that this dual speed is reflected in the different treatment for women in the **workplace**, where a significant gap persists in economic and stability terms between men and women, and where the gap is widening further, especially in the field of academic and scientific careers.

## OBJECTIVES

- Increase the enrolment of female students in STEM programmes
- Strengthen the female presence within the university
- Draw recent female graduates close to the labour world

## ESSENTIAL DATA

- In the academic year 2017-2018, enrolments by female students amounted to **34.4%** (**31.4%** in laurea triennale programmes (equivalent to Bachelor of Science) and **37.8%** in laurea magistrale programmes (equivalent to Master of Science)), slightly but constantly on the rise (+ 8% from 2000 to the present day).
- Women enrolled in Architecture were **57.8%** of the total, **61%** in Design, and **22.7%** in Engineering.
- In the 2000-2012 period, withdrawal rates of girls were constantly lower than those of their male counterparts. As regards laurea triennale programmes, the rate was **19.4%** v. **28.3%** in Architecture; **17.4%** v. **24.3%** in Design; and **25.6%** v. **35.8%** in Engineering.
- In the 2000-2013 period, the percentage of master's graduates out of the total number of students was higher for girls: **93%** v. **89.6%**.
- The average graduation marks of female graduates (2012 intake) show performance levels that are slightly but constantly better than those of male graduates.
  - In Architecture, female bachelor graduates achieved an average mark of **102** against the **100.3** of male graduates; and female master graduates scored **106,7** against **105.4** of their male counterparts.
  - In Design, female bachelor graduates scored **101** and their male counterparts **99.6**; female master graduates recorded a final grade of **106.5** and male graduates **105.9**.
  - In Engineering, female bachelor graduates achieved an average score of **94.5** and male graduates **93.7**; female master graduates scored **103.2** on average and their male counterparts **102.1**.
- In the XXXIII PhD cycle (2018 admissions), enrollments for PhD programmes in Architecture were **58.6%** of the total, **60%** in Design and **29.6%** in Engineering.

- 12 months after attaining master's degree (2016 data): **85%** of women v. **86.2%** of men in Architecture; **88.7%** v. **93.8%** in Design; and **94.6%** v. **96.3%** in Engineering were employed or furthering their studies.
- At the end of the PhD (2016 data) **89.9%** of women were employed compared to **95.5%** of men.
- 12 months after attaining a master's degree (2016 data): **22.2%** of women had an permanent employment contract against **25.7%** of men in Architecture; **44.6%** of women against **43%** of men in Design; and **47.4%** of women against **57%** of men in Engineering.

## ACTIONS UNDERTAKEN

### Attracting girls towards STEM subjects

- Meetings at secondary high schools and summer camps (TechCamp@Polimi)

### Fostering educational initiatives

- Course in "Communication Design and Gender Cultures" ((Laurea triennale (equivalent to Bachelor of Science))
- Inter-departmental PhD:
  - Scholarship in "Assessing gender biases through data analytic techniques for promoting diversity and inclusion in entrepreneurial and organization contexts"
  - Modular programme with training offer focused on gender prejudice, gender culture, discrimination and technologies
- Online courses: 2 editions of the "Embracing Diversity" Massive Open Online Course (MOCC)

### Entering the job market

- Training meetings on the topics of inclusion and diversity in professional contexts
- Funding corporate bursaries and scholarships by the Politecnico
- Meetings devoted to the issues of female leadership and professionalism jointly with companies





## PROFESSORS

*“Women who have changed the world never needed to prove anything other than their own intelligence.”*

*(Rita Levi Montalcini)*

First the good or the bad news? As we could expect, being a technical university, at Politecnico di Milano the percentage of women within the Faculty lags behind national data, which, according to the MIUR's (Italian Ministry of Education) report headed "Focus sulle carriere femminili" ("Focus on women's careers") (2019), is 40%.

However, if we look back, since 2000 the number of **women has risen significantly** in our university, by more than 8 percentage points. If we now see one woman out of every three professors, that is a positive sign, which opens up new prospects for the future. It is the expression of a slow yet constant march towards gender equality. It is synonymous of a university that encourages younger women to enter an academic career, simultaneously with the retirement of mainly male professors.

Nevertheless, many women, torn between ambition and desire for maternity, end up being excluded from career advancements. As is the case after all at both national and international level, women are still under-represented in the top echelons. Suffice to think that in only two departments out of twelve at Politecnico the percentage of female full professors is comparable with that of their male colleagues.

This is a condition the world of academia shares with many other socio-economic realities. From businesses to politics, several contexts make room for **incentives and tools assisting women's professional growth**. A message we wish to convey not just in women's exclusive interest but also on behalf of productivity and improvement of the entire system.

Female researchers, in fact, prove themselves capable of performing high-level scientific activity, despite the heavier family load, while keeping pace also with European projects and patent activity.



## OBJECTIVES

- Survey, characterise and quantify gender prejudices
- Plan actions to mitigate them and eventually avoid them
- Provide the necessary aids to the work-family reconciliation

## ESSENTIAL DATA

- In the academic year 2017-2018, the percentage of women within the Faculty amounted to **28.7%**, constantly on the rise (+ 8% from 2000 to the present day).
- The average age was **48 years and 6 months** for women compared to **49 years and 3 months** for men.
- In the entry positions, female researchers were in excess of **30%** (types A and B).
- Female full professors were **22.4%** of the total. If, however, we assume 100 female professors at the University, the share of full professors has risen by 7 percentage points since 2000, to eventually reaching **21.6** in 2018.
- In 5 departments out of 12, female full professors were **15%** of the total.
- In terms of scientific productivity, the data were comparable between the two genders.
- Out of the 320 Horizon 2020 proposals, **24.7%** were put forward by women. The rate of funded projects (12%) was comparable between the two genders.
- In patent terms, 57 patent applications have been lodged in 2018: **36.8%** counted women among the inventors.
- The University's Glass Ceiling Index (GCI) is 1.28, less than the European value indicated for 2013 by the "She Figures" research (1.75)\*.
- Within the University bodies, women boasted 1 of the campus vice rectors, 1 of the 12 heads of department, and **5** of the 25 senators.

\*The GCI correlates the percentage of women in all posts with the percentage of women in the highest job position, i.e., Full Professors. An index value in excess of 1 indicates that the percentage of women in the in the highest job position is less than the percentage obtained by taking all job positions into account, thereby suggesting the presence of a difficulty faced by women in reaching the highest level of academic career.

## ACTIONS UNDERTAKEN

### Analysis and prevention

- Trans-disciplinary research nucleus "Promoting diversity and gender equality in education, science, and in society as a whole: a multi-disciplinary approach"
- "HR Excellence in Research" award from the European Commission\*
- Seminars and training courses to prevent and combat the different forms of discrimination and raise awareness on gender issues
- Online courses: 2 editions of the "Embracing Diversity" Massive Open Online Course

### Economic support

- Economic support for female researchers who resume research work straight after maternity
- Crèches at the Politecnico facilities (2 in Milano, 1 in Lecco jointly with a private structure. Overall, in 2017-2018 they hosted 40 children)
- Free-of-charge child admission to the Politecnico's crèche for new mothers pursuing a PhD
- Hospitality centres for employees' children (from 4 to 13 years) open during the summer and Easter school holidays (in 2017, 112 persons used the summer centre; in 2018, the number rose to 125)

\*HR Excellence in Research is the award for commitment to implementation of the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers for the employment of researchers and the definition of better working and career conditions starting from support to female researchers.



59%

## TECHNICAL - ADMINISTRATIVE STAFF

*“We need to prove that equal opportunities are echoed by equal merits.”*

*(Marisa Bellisario)*

Women look after, organise and communicate. There is no doubt that tradition has assigned them very precise functions. Whether the outcome of culture or habit, it is hard to overcome a conservative approach that is evident within our university as well.

The female presence is, in fact, **more concentrated within the central administrative structures**, especially in areas **responsible for communications, external relations and staff management**. Conversely, structures with a chiefly technical character and laboratories have a strong male connotation.

A portrait that does not surprise us, the more so if we consider an economic framework that sees women mainly represented in the lower categories, whereas the female component shrinks down as the contractual career moves further up. A closer look will reveal that the percentage of women making use of leave and permits exceeds that of men, consistently with the traditional allocation of support and family caregiving.

One of the tools deployed to reverse the tendency, actions deliberately facilitating a greater flexibility in working hours, are heading precisely in this direction, with a view to fostering greater gender equality in the performance of one’s functions and in career advancement. These actions aim not only to tackle a mere issue of reconciliation, but especially to **create an efficient organisational and work management system**. A system that promotes and protects the enhancement of the worker’s skills and individuality, and enables his/her dynamic adaptation to the working conditions throughout the working life.

## OBJECTIVES

- Enhance the university welfare
- Maintain an efficient organisational and work management system

## ESSENTIAL DATA

- In 2018, the percentage of women within the technical-administrative staff amounted to **59.4%** of the total personnel.
- **6%** of women belonged to the EP category (i.e. middle management); **87%** to the C and D categories.
- **2** women and **4** men were part of top management.
- Among the 62 heads of service and staff managers, **56.4%** were women.
- In three areas, the male presence was prevalent: Infrastructures, Estates and General Services; Conservation and Building Services; ICT Services.
- **4** women out of 5 were campus operation managers.
- **58.82%** of department operation managers were women.
- The technical staff in labs still consisted prevalently of males. In 3 departments (Mechanics, Physics, Mathematics), they were only men.
- The University's Glass Ceiling Index\* is 1.45 (higher than the stated target, equivalent to 1).
- **58.23%** of women made use of family leave, compared to **32.12%** of men.
- Out of 73 persons who availed themselves of telework, **86.30%** were women.

\*The GCI correlates the percentage of women in all posts with the percentage of women in the EP category. An index value in excess of 1 indicates that the percentage of women in the EP category is less than the percentage obtained by taking all job positions into account.

## ACTIONS UNDERTAKEN

- Seminars and training courses to prevent and combat the different forms of discrimination and raise awareness on gender issues
- Online courses: 2 editions of the “Embracing Diversity” Massive Open Online Course (MOOC)
- “Maternity and work - a possible achievement” project to facilitate reintegration to the work context of employees resuming duties after maternity or after a medium-to-long-term absence
- Crèches at the Politecnico facilities (2 in Milano, 1 in Lecco jointly with a private structure. Overall, in 2017-2018 they hosted 40 children)
- Hospitality centres for employees' children (from 4 to 13 years) open during the summer and Easter school holidays (in 2017, 112 persons used the summer centre; in 2018 the number rose to 125)

## ECONOMIC RESOURCES AND COLLABORATIONS

The university provides **specific annual funds** in support of equal opportunities.

More specifically, it funds the activities of the CUG (Guarantee Committee), with which it implements training initiatives, events and specific activities; it provides an annual contribution to co-fund the fees for the crèche and the summer centres; it invests specific resources to activate the rising number of workstations for telework and smart working and to the management of the counselling service desk.

Moreover, in 2018 a huge ad hoc funding scheme, with a three-year duration, was arranged, to backup all activities implemented as part of the POP project (activation of scholarships, economic support schemes, training activities and events).

2016	2017	2018	2018 ad hoc funding
€ 276.000	€ 349.500	€ 479.500	€ 560.000

### COLLABORATIONS

Politecnico di Milano partners with companies and institutions that work for gender equality and have decided to take on an active role in the development of inclusive work and study environments accommodating everyone, regardless of sexual orientation, identity and gender expression.

- **Parks - Liberi e Uguali**, a non-profit association, created to help companies understand and optimise the business potential associated with the development of strategies and good practices respectful of diversity.
- **Valore D**, a group of companies committed to gender balance and an inclusive culture in organisations, through an integrated approach that provides tools and opportunities for discussion between companies and with institutions.
- **CRUI** – Conference of Italian University Rectors Working Group on gender issues
- **Inter-university research centre for Gender Culture**, set up with the aim of giving permanent impulse to studies, research and positive actions relating to the topic of gender culture, thereby contributing to the growth and dissemination of respect for women's dignity and skills.





