



## Faculty of Physics



The Faculty of Physics of Vilnius University is the largest physics science centre in Lithuania, offering four Bachelor, six Master, and three doctoral study programmes. The Faculty is actively engaged in international projects and maintains long-standing cooperation with both academic and business institutions – partnerships that continue to drive advanced scientific research.

The new Erasmus Mundus joint Master programme ‘Europhotonics’, implemented with other European universities, focuses on photonics research and applications. In 2025, another joint Master study programme, ‘iPSRS’, will be launched, focusing on photonics technologies for security and sustainability. Both programmes will operate under the Erasmus Mundus model. To provide incentives for the most talented students, 11 nominal scholarships were established at the Faculty, including the Professor Algis Petras Piskarskas scholarship for the best final thesis on laser physics.

Opened in 2024, the Didactics Centre strengthens the training of physics teachers, offers professional development programmes, and unites school, University, and business communities.

The Faculty’s researchers implement significant international projects. Prof. Mantas Šimėnas received a EUR 2.5 million ERC Grant for EPR spectroscopy (‘Strong-ESPRESSO’). The ‘PhotoCaM’ project, worth EUR 2.6 million and funded by the Marie Skłodowska-Curie programme, promotes the development of computational science specialists. ‘ChipsC2-LT’ (EUR 4 million) will create the Lithuanian Semiconductor Competence Centre, whereas the Centre of Excellence for Advanced Light Technologies (EUR 5.5 million) has brought together experts in laser research, photonics, and materials engineering to carry out eight fundamental and applied research projects.

The Faculty’s contribution to science has gained international recognition – the University has become a member of the CERN LHCb experiment, and its researchers have been given the opportunity to participate in particle physics research. The Faculty represents the University in several of the most important Lithuanian scientific research infrastructures, including LitGrid-HPC, the Lithuanian Consortium for Particle Physics, and Molėtai Astronomical Observatory.

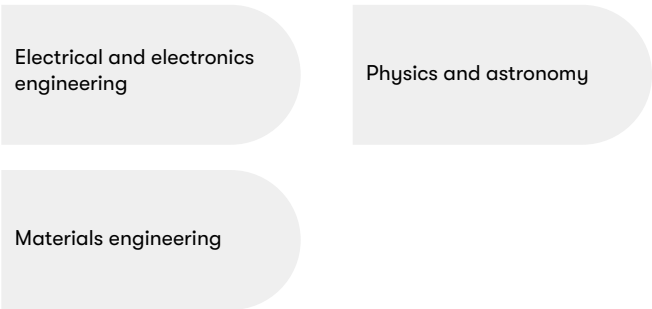
The Faculty’s researchers have won significant awards. The Lithuanian Science Prize was awarded to Prof. Jūras Banys, Prof. Mantas Šimėnas, Dr Janas Macutkevičius, Assoc. Prof. Šarūnas Svirskas, Assoc. Prof. Sergejus Balčiūnas, Assoc. Prof. Vidmantas Kalendra, and Prof. Robertas Grigalaitis for their research on the spectroscopy of microwaves of functional materials. Prof. Gediminas Gaigalas was awarded the title of Honorary Doctor of Malmö University, and Dr Arūnas Varanavičius was awarded the Cross of the Knight of the Order of the Lithuanian Grand Duke Gediminas for his contribution to science and innovation. The title of Honorary Doctor of Vilnius University was awarded to Prof. Hans Kjeldsen for his achievements in astroseismic research.

Significant results have been achieved in astronomy; Prof. Gražina Tautvaišienė became Vice-President of the International Astronomical Union, Dr Carlos Viscasillas Vázquez was appointed member of the ACEBaltic Association and the Executive Council of the EAAE, and Dr Šarūnas Mikolaitis – the national representative of Lithuania. The achievements of the astronomers of Vilnius University were presented during the visit of Xavier Barcons, ESO Director General, to Molėtai Astronomical Observatory.

**Prof. Dr Aidas Matijošius, Dean**

# KEY FACTS AND FIGURES

## Areas of research interest



## Study portfolio in 2024

	Bachelor studies	Master studies
Total number of programmes implemented	4	6
Double-diploma programmes	-	1
Programmes implemented in a foreign language	1	2
Number of programmes intended to be implemented	-	1
	Doctoral studies	
Number of science fields	3 (Physics, Astronomy, Electrical and Electronics Engineering)	

The figures for the study programmes are based on the data of 1 October.

## Number of employees, students, and graduates in 2024

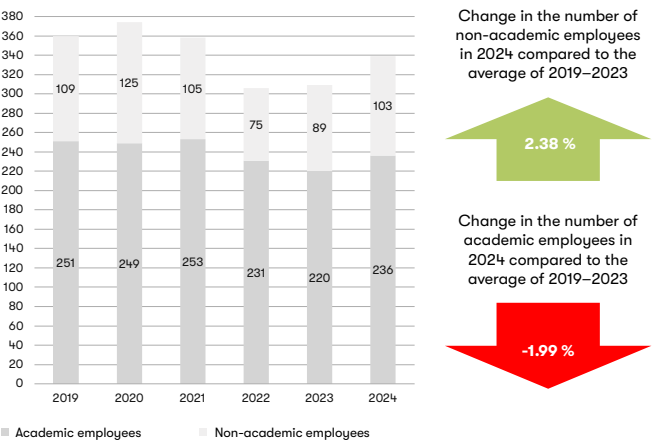


## Number of foreign nationals employed in 2023–2024

	Academic employees	Non-academic employees	Total
2023	16	3	19
2024	15	3	18

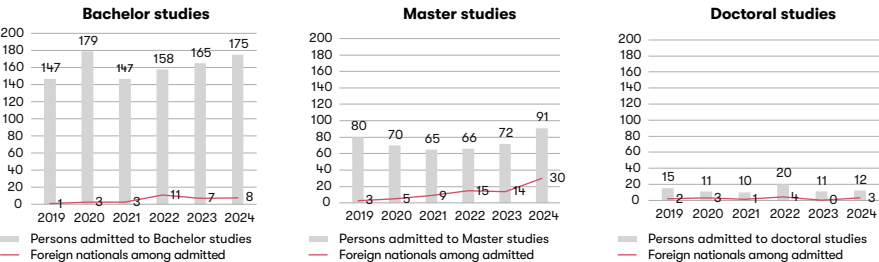
Based on the data of 31 December.

## Changes in the number of employees, 2019–2024

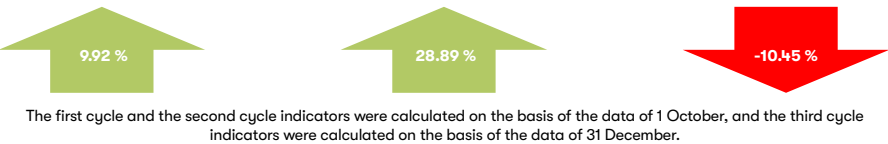


Based on the data of 31 December.

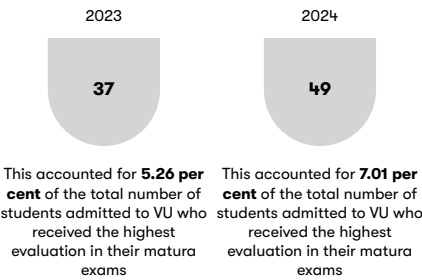
## Admissions to studies, 2019–2024



## Change in the number of admitted persons by study cycle in 2024 compared to the average of 2019–2023

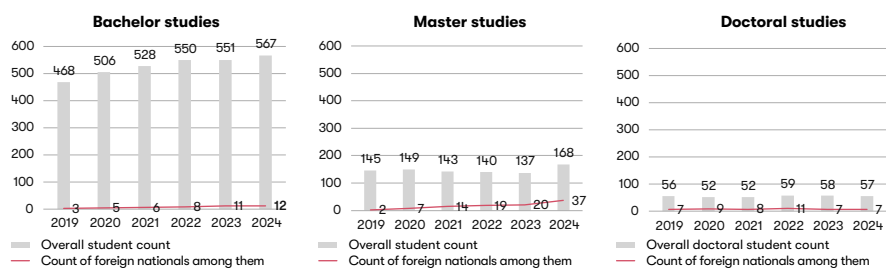


## Number of admitted students who received the highest evaluation in their matura exams in 2023–2024



Based on the data of 1 October.

## Number of students, 2019–2024

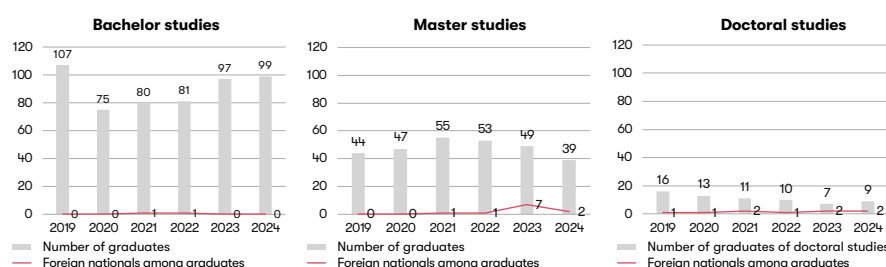


Change in the number of students by study cycle in 2024 compared to the average of 2019–2023



The first cycle and the second cycle indicators were calculated on the basis of the data of 1 October, and the third cycle indicators were calculated on the basis of the data of 31 December.

## Number of graduates, 2019–2024



Change in the number of graduates by cycle in 2024 compared to the average of 2019–2023

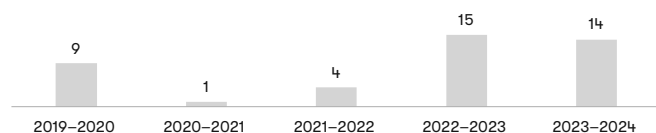


The first cycle and the second cycle indicators were calculated on the basis of the data of 1 September, and the third cycle indicators were calculated on the basis of the data of 31 December.

## Mobility of students, doctoral students and employees, 2019–2024

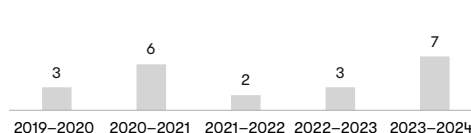
### Bachelor studies

Partial study visits under bilateral university agreements, Erasmus+, and ISEP exchange programmes



### Master studies

Partial study visits under bilateral university agreements, Erasmus+, and ISEP exchange programmes

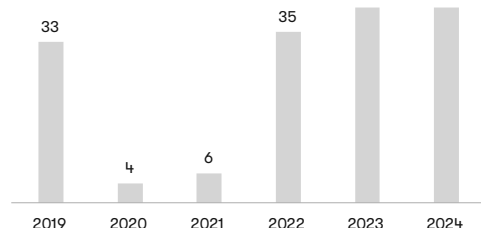


International internship visits under the Erasmus+ programme in 2024

1

### Doctoral studies

Doctoral study visits to higher education institutions and companies with a duration of more than five days

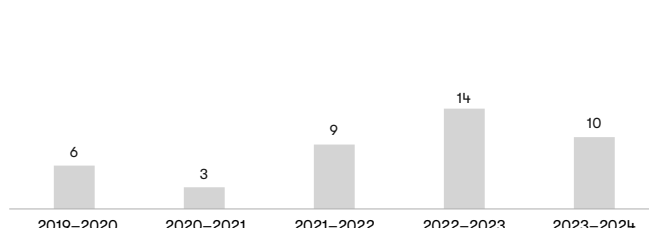


International internship visits under the Erasmus+ programme in 2024

2

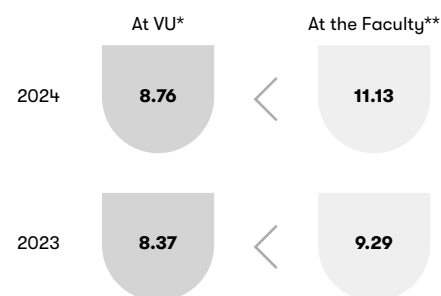
### Academic and non-academic employees

Visits under the Erasmus+ programme for teaching and learning purposes\*



\*The statistics on employee mobility do not include secondments and work placements carried out under mobility forms and programmes other than Erasmus+.

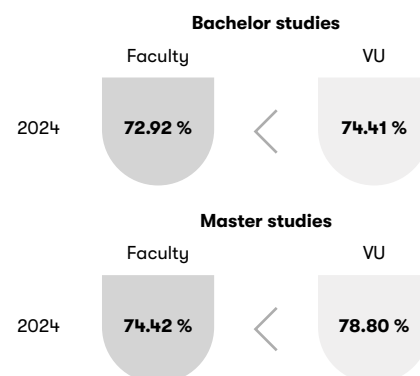
## Student–faculty ratio, 2023–2024



\* Calculated by dividing the total number of VU students in the first cycle, second cycle, integrated, and professional (pedagogy) studies on 1 October by the total number of VU teaching staff on 31 December.

\*\* Calculated by dividing the total number of Faculty students in the first cycle and second cycle on 1 October by the number of Faculty teaching staff on 31 December.

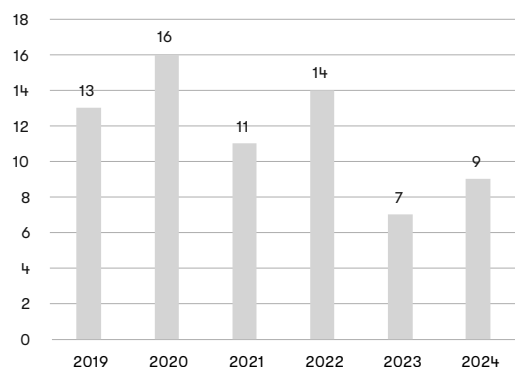
## Graduate career success in 2024



Target outcome → the level of highly qualified graduates and/or graduates continuing their studies in a higher cycle growing at least 1 per cent annually, but no lower than 60 per cent. Based on the data of 1 October.

Based on the data of 31 December.

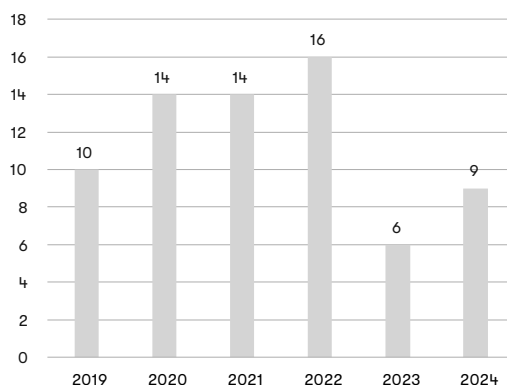
## Successfully defended dissertations, 2019–2024



The total number of successfully defended dissertations during the period of 2019–2024 is 70

Based on the data of 31 December.

## Number of postdoctoral trainees at the University, 2019–2024



Average number of postdoctoral trainees per year is 11.5

Based on the data of 31 December.

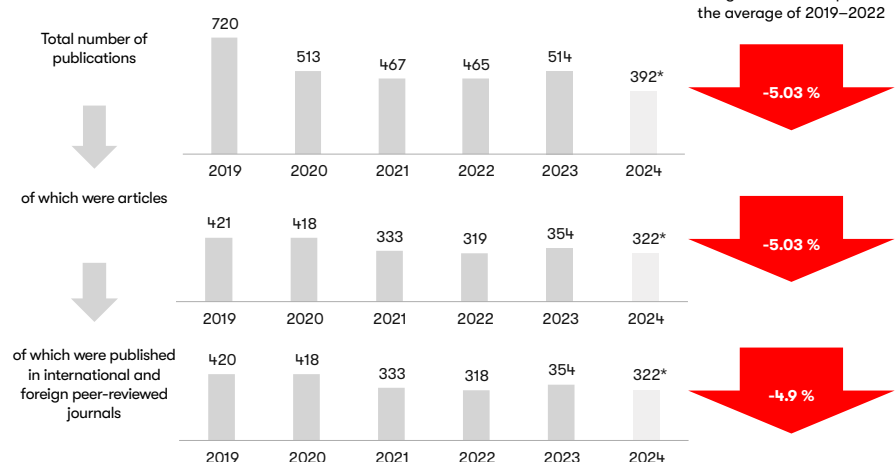
## Number of patents granted in 2024

1\*

\*Acquired in collaboration with another academic unit.

Data of 31 December.

## Number of publications, 2019–2024



\* The publication figures for 2024 are based on the data of 10 February 2024 and are not exhaustive, as the registration of publications was still ongoing at that time. The publication figures for 2024 are not included in the calculations.

## Projects, 2023–2024

	2023	2024
Financial value of projects administered by the University (EUR million)*	43.07	26.32
Total number of projects implemented**	94	116
Implemented projects that were funded by international funds and/or international programmes	14	15

\* The value of projects implemented in a given year is presented.

\*\* The total number of projects include projects whose activities were in the implementation phase during the given year. In the case of internal partnership at VU, i.e. when several faculties participated in one project, the project was accounted only once and assigned only to the unit that owned the project.

## Key projects in 2024

### The Centre of Excellence of Advanced Light Technologies of Vilnius University

The value of the project amounts to EUR 5,500,000. The project is funded by the Ministry of Education, Science and Sport/Research Council of Lithuania under the programme 'Universiteto ekselencijos iniciatyva' ('University Excellence Initiative') (Project No. S-A-UEI-23-6). Project manager – Prof. Dr Audrius Dubietis. The project is implemented by the Faculties of Physics, Chemistry and Geosciences, and Medicine.

### Photosynthetic Antennas in a Computational Microscope: Training a New Generation of Computational Scientists (PhotoCaM)

The value of the project administered by the University is EUR 229,327.20. The project is funded by the European Commission, the Horizon Europe programme (Project No. 101119442). Project manager – Prof. Dr Darius Abramavičius.

### Kvantinė inžinerija ir informacijos valdymas pasitelkiant struktūrizuotą šviesą (Quantum Engineering and Information Control With Structured Light)

The value of the project amounts to EUR 299,810.88. The project is funded by the Research Council of Lithuania under the impact-driven programme Information Technologies for the Development of Science and Knowledge Society (Project No. S-ITP-24-6). Project manager – Prof. Dr Egidijus Anisimovas.

### Dokumentų liuminescencinis pažymėjimas ir jo mobilus detektavimas naudojantis hiperspektriniu vaizdinimu bei dirbtiniu intelektu (Luminescent Tagging of Documents and the Method of Their Mobile Detection Based on Hyperspectral Imaging and Artificial Intelligence)

The value of the project amounts to EUR 100,000. The project is funded by the Research Council of Lithuania under the M-era.Net programme (Project No. S-M-ERA.NET-23-2). Project manager – Prof. Dr Pranciškus Vitta.

### National Competence Centres in the Framework of EuroHPC Phase 2 – EuroCC 2

The value of the project administered by the University is EUR 419,117.93. The project is funded by the European Commission's Digital Europe Programme (DIGITAL) (Project No. 101101903) and the European Regional Development Fund (Project No. 10-051-P-0001). Project manager – Assoc. Prof. Dr Mindaugas Mačernis.