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University of Vienna 2028 Development Plan



**MAKING A
DIFFERENCE.**

SINCE 1365.

University of Vienna 2028 Development Plan

Upon the Proposal of the Rectorate,
Following Consent by the Senate of the University of Vienna on 26 November 2020,
Unanimously approved by the University Board of the University of Vienna on 18 December 2020.

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1. Preamble: University of Vienna. Making a Difference. Since 1365.

The University of Vienna is a modern and, at the same time, a long-standing, large institution which considers it an obligation to carry out quality-oriented research and research-led teaching. It is an attractive employer in the city, a major economic factor for the urban region and a driving force for politics and society. The University of Vienna is an attractive institution for students and employees and helps shape the future in this country and beyond.

This *Development Plan* presents the framework conditions, the general principles of the University's policy measures and the plans coordinated with the faculties and centres regarding the future direction of research and teaching. Compared to the starting point in the previous *Development Plan* three years ago, two further developments in particular can be noted at the University of Vienna:

On the one hand, the University of Vienna was able to use the 'new university funding scheme', realised in a first expansion phase in 2019, to significantly increase the budget funds available to it in the three-year period 2019–2021 (compared to the three-year period 2016–2018) and, in line with its nature as a knowledge organisation, has invested these funds with a view to the future: The strategically controlled increase in personnel, especially through international appointments for numerous professorships (including tenure track professorships), serves both to improve the student-teacher ratio in degree programmes that are in high demand and to strengthen research, especially in strategically important areas of the future. This strategic increase in personnel now needs to be consolidated in the long term and also continued according to the funds available.

Secondly, the COVID-19 pandemic posed particular challenges for the University of Vienna in the summer semester of 2020 and will probably continue to do so in subsequent semesters. As an institution in society, the University of Vienna made and continues to make significant contributions to help understand and deal with the pandemic, also and especially on the basis of its strong basic research. Thanks to the continuous efforts and foresight of the university members, it was also able to carry out its tasks very well during the pandemic, considering the circumstances. In this context, the response to the pandemic also accelerated developments at the University, some of which will continue to shape the University of Vienna even after the health challenge has gone away – while maintaining the University of Vienna's successful position as a university offering face-to-face teaching.

This *Development Plan* sets out a number of objectives, details of which can be found on the following pages. These include in particular: The University of Vienna is one of the leading educational and research institutions in Europe and emphasises the importance of research-led teaching.

It pursues the goal of positioning itself among the best research universities in Europe, dynamically develops its profile and in particular its proven strengths in research. Moreover, it emphasises basic research that is open to application as well as the role of the University in the innovation chain. In addition to the necessary continuous basic funding of university research and teaching, the successful acquisition of high-quality third party-funded projects, especially if they are acquired in competitive procedures, is an indication of the competitive-

ness of the University and should therefore be increased if possible (the budgets of the funding bodies are limited). The University of Vienna supports expansion into new areas of research and sees interdisciplinarity as a particular opportunity for the University to be an attractive location for the best academics and students. With its teaching, it assumes a special responsibility for the qualification of students, which is also expressed in the promotion of Active Studying. Here, however, it does not only want to ensure that graduates have professional qualifications, but it also wants to create curious young people with critical ability who continue to educate themselves. The University of Vienna aims to contribute to the future of the next generations through its solid, research-led bachelor's programmes and attractive, research-led master's programmes and doctoral programmes that are visible throughout Europe.

The University of Vienna actively fulfils its diverse role in society, for example through active academic communication, in order to also illustrate the importance of university-based knowledge for society in this way. It is positioned as an attractive employer, upholds the principles of diversity and internationality, is open to cooperation, especially in Vienna, and uses the potential of digitalisation for an overall, actively coherent digital transformation. It invests in infrastructure and will continue to develop its locations in both technical and structural terms and consolidate its portfolio of locations.

As the largest university in the country and therefore an influential research and education location, the University of Vienna is also aware of its responsibility in terms of important societal challenges. Due to the scientifically proven facts of progressive, anthropogenically induced climate change and massive extinction of species and the associated impacts on all areas of life, the need for a social transition towards a sustainable society capable of surviving has become evident and urgent. The principle of sustainability should therefore be implemented in all core areas at the University in accordance with a sustainability strategy that needs to be developed. The University of Vienna pursues the goal of achieving climate neutrality as soon as possible.

To achieve the objectives in the *Development Plan*, it is necessary to maintain and further develop the legally guaranteed autonomy and the successfully established personal responsibility for staff-related and investment decisions in the implementation of strategic planning and also to boost the trustful and efficient cooperation between the different governance bodies and organisational levels of the University. Additionally, all members of the University need to be appropriately integrated into the decision-mak-

ing process by making use of their expert knowledge. And the University needs those political and financial framework conditions that allow it to consolidate and complete the dynamic growth process of recent years, to fulfil its tasks and maintain its attractiveness. With these framework conditions in place, the University is well prepared for another six successful years.





2. Starting Point

2.1 Research at the University of Vienna

The University of Vienna is a strongly research-oriented university with a high international profile. If we look at the development of research performance at the University of Vienna in recent years and, as an example, consider the quality and quantity of publications by academics from the University of Vienna and the receipt of prestigious academic prizes such as ERC grants, a very positive trend can be seen. The University of Vienna is the largest and, internationally, the most visible university in Austria. In the area of third-party funding, which is an important indicator of the performance and competitiveness of its researchers, the University of Vienna has been able to maintain a high level in recent years, although there is still potential for improvement. This applies in particular to application-oriented research projects, such as those funded by the Austrian Research Promotion Agency (FFG), the Christian Doppler Research Association and companies. Therefore, the University of Vienna intends to increase the acquisition of third-party funds from quality-oriented procedures of various funding bodies in the coming years (see chapter 3.1.1: Research and chapter 2.3: Financial Starting Point of the University of Vienna).

The achievements of the academics, which can also be seen in the indicators ERC prizes and third-party funds acquired, for instance, provided the basis for grouping together the cross-faculty research specialisations (see chapter 3.1.1: Research).

Publications

An evaluation of the publications from academics at the University of Vienna between 2014 and 2018 reveals a slight decrease in the total number of publications from academics of the University of Vienna (2014: 8,303, 2018: 7,691). Here, however, an increase can be seen in publications with peer review and in publications which appeared in publication media that are indexed in the Web of Science (see Diagram 1). The number of publications with peer review increased from 4,581 to 5,611 (+22.5 %). Peer review is of major importance in academia for assessing the suitability of an academic text for publication and assuring the quality of academic publications. Peer review could be extensively established as a key quality criterion for publications throughout the entire University. An increase in this area, which comprises all publication types, including monographs and edited volumes, indicates active quality awareness. The number of publications which appeared in journals listed in the Web of Science increased from 2,519 (2014) to 2,641 (2018), an increase of 4.8 %. The indexing in this, the largest international publication database (publisher: Clarivate Analytics) also represents an important quality characteristic based on the criteria that have to be fulfilled by the publication media (including peer review). The number of top 25 % or Q1 publications that were published in the best 25 % (therefore the 1st quartile or Q1 for short) of journals in the respective subject area in the Web of Science fluctuates at a high level between 1,414 (2014) and 1,365 (2018) over the same period of observation.

The practised internationality of the academics at the University of Vienna can also be seen, for instance, in the rising number of publications

with international co-authors in the period of observation between 2014 and 2018 and their share among the total publications of academics from the University of Vienna in the Web of Science (see Diagram 2). The total number of publications with international co-authors increased from 1,755 to 2,045 (+16.5 %), the share of publications with international co-authors among all publications in the Web of Science increased

from 63.6 % to 68.8 % (+5.2 %). In the case of evaluations in the Web of Science, it must always be taken into consideration that this does not cover the entire range of the University of Vienna in the area of research because other criteria are common in some academic disciplines such as the social sciences and humanities (SSH) subjects (see the section 'The University of Vienna in an International Comparison' below).

Publications by the University of Vienna 2014–2018

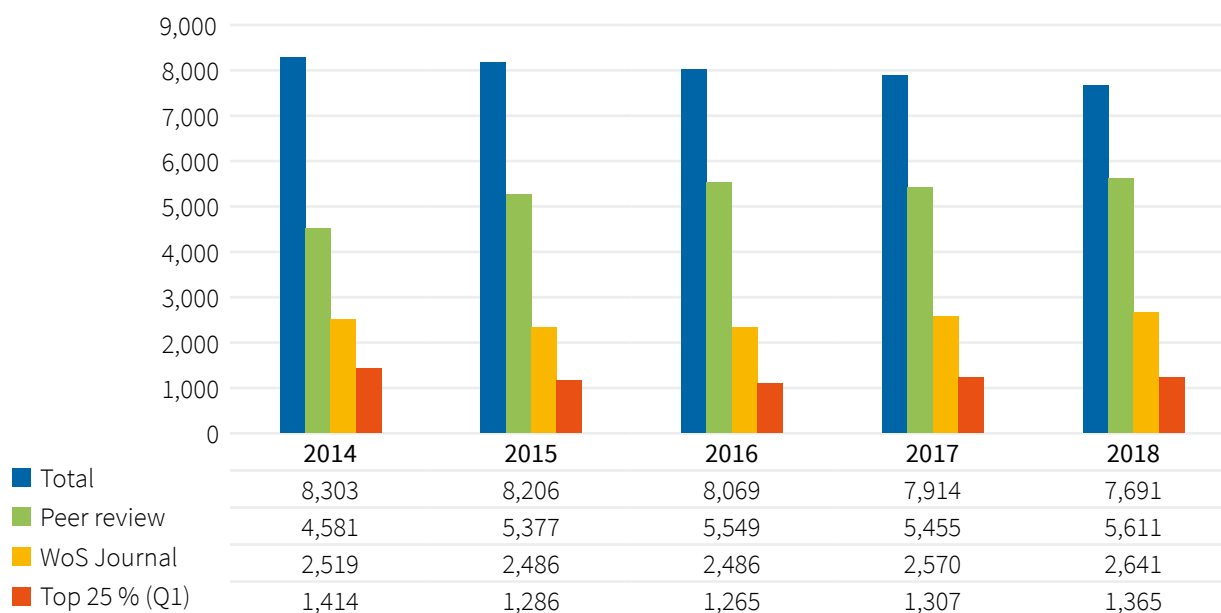


Diagram 1: Number of publications by the University of Vienna between 2014–2018: total number, publications with peer review, number of publications in the Web of Science, top 25 % publications (Q1) in the Web of Science (A&HCI; SCIE; SSCI); (source: u:cris, data as at June 2020).

Publications with international co-authors in the Web of Science

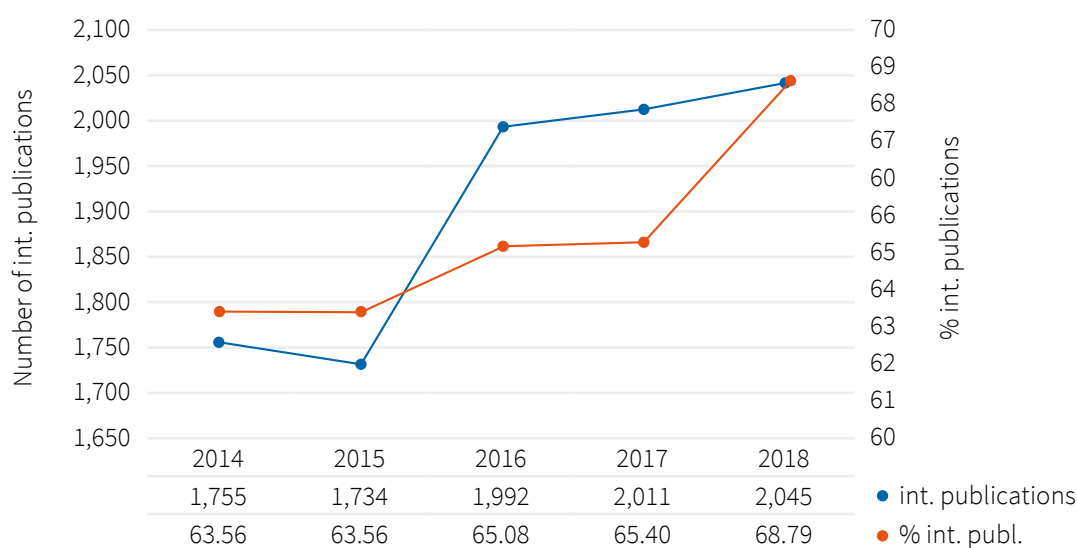


Diagram 2: Publications with international co-authors in the Web of Science (number and percentage of all journal articles in the Web of Science 2014–2018) (source: InCites, data as at June 2020).

Visibility and competitiveness of a research university can be seen, in addition to the academic publication activities, participation in international projects and positioning in international subject rankings (see chapter 3.1.1: Research), in particular in the cooperation projects with other renowned national and international research institutions. An evaluation of joint publications from 2014 to 2018 shows numerous cooperation

projects with highly renowned international institutions such as Harvard University (238 joint publications), ETH Zurich (225 joint publications), the University of Cambridge (169 joint publications) and University of Oxford (166 joint publications).

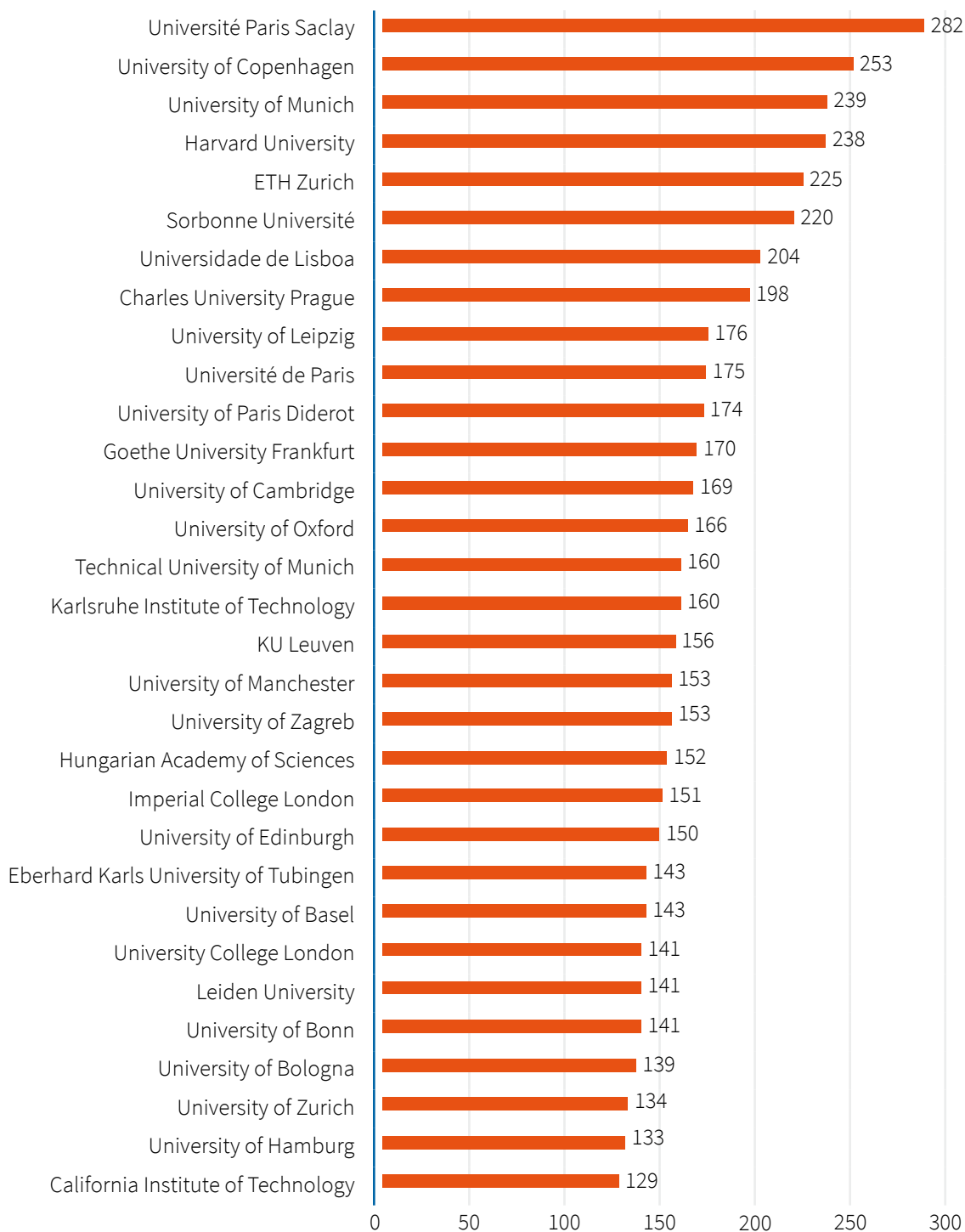


Diagram 3: Cooperation projects of the University of Vienna with other international universities. The cooperating universities were ranked according to the number of joint publications in the Web of Science (top 30, publication time frame: 2014 to 2018). Only institutions with at least 50 joint publications were ranked in the evaluation. (Source: InCites, data as at June 2020).

A graphic presentation of co-authorships in In-Cites for 2018 (see Diagram 4) shows strong connections between academics from the University of Vienna and colleagues in the Vienna area (in particular at the Medical University of Vienna, at TU Wien, the University of Natural Resources and Life Sciences, Vienna and at the institutes of the Austrian Academy of Sciences), at other Austrian universities (in particular the Universities of Innsbruck and Salzburg) and at many renowned international universities (e.g. Stanford, Cambridge, Oxford, Munich and Zurich).

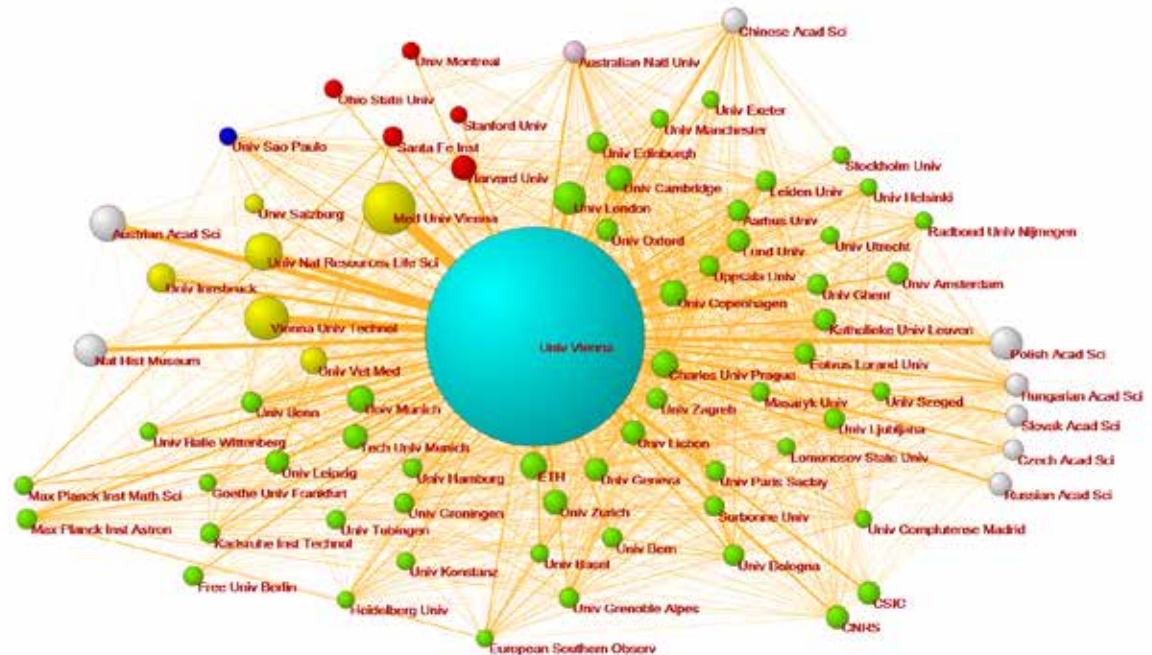


Diagram 4: Graphic presentation of cooperation projects entered into by the University of Vienna for the year 2018, based on the documents listed in the Web of Science with affiliation to the University of Vienna and other national and international institutions (threshold value: 50 joint publications). The bigger the dot and the thicker the connecting line, the more joint publications were listed in the Web of Science. For presentation reasons, the distance to the University of Vienna is different and does not depend on the intensity of the cooperation projects. The institutions were grouped manually according to geographical criteria. Academic associations were clustered. Colour code: yellow – Austrian institutions, green – European institutions, red – North American institutions, pink – institutions from Asia and Australia, white – academic associations and the Natural History Museum Vienna (source: InCites, data as at June 2020).

The University of Vienna in an international comparison

In terms of its size, the University of Vienna can be compared only to some extent to other institutions at the national level. The University aims to be one of Europe's top research universities. An analysis of the financial framework conditions therefore also has to include a comparison with approximately comparable foreign institutions, and in this respect in the following the University of Zurich, the LMU Munich and the University of Uppsala in Sweden will be used. In a comparison of budget and numbers of students, these universities have clearly higher budgets and clearly fewer students. Therefore, for the compared universities, there are considerably more favourable student-teacher ratios and more budget funds available per student/per graduate (see also chapter 2.3: Financial Starting Point of the University of Vienna).

An evaluation of the Web of Science publications with InCites shows that, in the period 2014–2018, the University of Vienna also published at a very high level of quality in comparison with these prestigious universities. This can be seen, for instance, in the development of the share of the top 25 % publications (Q1) among the total Web of Science publications, which is above 50 % at all of the examined universities, and the development of the Category Normalised Citation Impact (CNCI), which is clearly above the average for the respective publication category at all universities. The CNCI is a normalised citation indicator for the respective subject area in the Web of Science where the value 1 corresponds with the average value of citations in the respective subject area. Values above 1 therefore indicate above-average citation frequency in the respective subject area.

% publications in top 25 % journals (Q1)

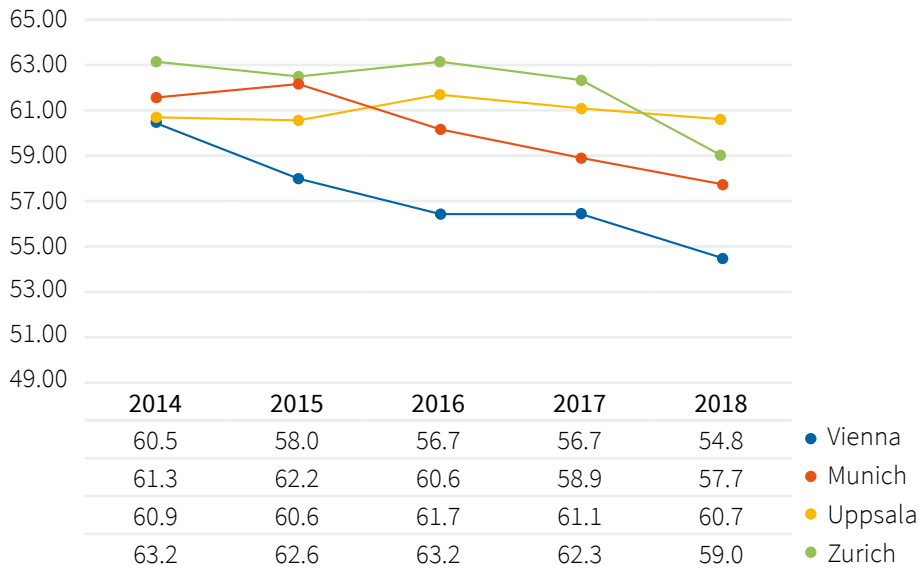


Diagram 5: Comparison of the development of the share of publications (Q1) in the publication period 2014–2018 (source: InCites, data as at June 2020). Note: This query was conducted using the InCites software, so the results differ slightly from the figures from the internal u:cris system shown in Diagram 1.

Category Normalized Citation Impact (CNCI)

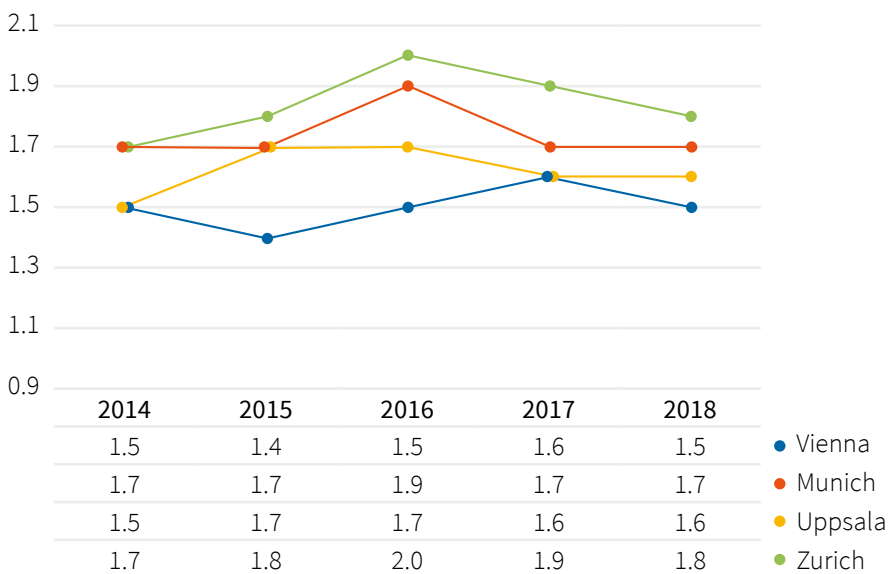


Diagram 6: Comparison of the development of the Category Normalised Citation Impact (CNCI) in the publication period 2014–2018 (source: InCites, data as at June 2018).

ERC grants

The performance and excellence of research can also be seen by the acquisition of the most prestigious research awards in the European Research Area, the ERC grants. By 2020, for example, as many as 61 of the prestigious ERC grants which have been conferred since 2007 by the European Research Council in a highly competitive procedure, were acquired by academics of the University of Vienna. As well as the reputation associated with the awards, which leads to significant international visibility for the award winners and their institutions, the projects – each of which has a budget of up to EUR 2.5 million – make a considerable contribution to the revenues from third-party funding of the University of Vienna. The 61 ERC grants, for example, have a total approved project volume of approximately EUR 95 million. The ERC grants have been conferred on academics who are active in many different subject areas ranging from life sciences, physics, mathematics and computer science to the social sciences and the humanities. Alongside the national awards, such as the START Prizes and Wittgenstein Awards of the Austrian Science Fund (FWF), they are therefore of particular significance for the funding and visibility of research excellence at the University of Vienna. They are thus also used as one of the key indicators for grouping together

the University's cross-faculty research specialisations (see chapter 3.1.1: Research). A comparison with the Universities of Munich, Zurich and Uppsala shows that the University of Vienna, although very successful, is clearly behind the LMU Munich and the University of Zurich in particular. This can also be seen by comparing the total number of ERC grants received with the number of professors. The LMU Munich excluding medicine has approximately 0.19 ERC grants/professor, the University of Zurich excluding medicine/veterinary medicine 0.18 ERC grants/professor, then comes the University of Vienna with 0.13 ERC grants/professor, followed by the University of Uppsala (including medicine) with 0.11 ERC grants/professor (see Table 2). However, it should be noted in this comparison that the total number of ERC grants acquired, excluding medical faculties, and the budget figures cannot always be calculated properly. The total figures for ERC grants were given for the period 2007–2020, the figures for professors for 2018/2019. The ratios given in the table should therefore be interpreted with appropriate caution. In any case, it is to be expected that the numerous (especially international) professorial appointments made since 2019 will lead to a significant increase in ERC grants at the University of Vienna.

University	Synergy Grants	Starting Grants	Advanced Grants	Consolidator Grants	Proof of Concept	Total
University of Vienna		31	16	11	3	61
LMU Munich	2	64	44	12	4	126
University of Uppsala	1	36	16	10	2	65
University of Zurich	1	37	31	26	4	99

Table 1: Number of ERC grants in the period from 2007 to June 2020 including medical faculties (source: European Commission).

University	ERC grants (2007-2020)	Number of professors (2018-2019)	ERC grants/professor
University of Vienna	61	478	0.13
LMU Munich (excluding medicine)	110	590	0.19
University of Uppsala (including medicine)	65	605	0.11
University of Zurich (excluding medicine/veterinary medicine)	81	450	0.18

Table 2: Number of ERC grants in the period from 2007 until June 2020 per professor. Staff figures for the University of Vienna: 2019, LMU Munich: 2018, University of Uppsala: 2019, Zurich: 2019. The number of ERC grants/professors at the University of Uppsala also include the ERC figures from the medical faculty (no figures excluding medicine available). For the LMU Munich and the University of Zurich, figures excluding medicine were used for the values number of professors and number of ERC grants (sources: European Commission, Accounting and Finance service unit, see chapter 2.3: Financial Starting Point of the University of Vienna; ERC grants excluding medicine according to the LMU Munich, for the University of Zurich a count was made from the CORDIS database).

International rankings of higher education establishments

International rankings of higher education establishments, such as the Times Higher Education Ranking (THE), the QS or the Shanghai Ranking (ARWU), enable only limited and, to some extent, distorted statements to be made about academic performance and illustrate only partial aspects of the range of services of universities. Still, they can be used as an indicator of the international visibility of an institution and its subdisciplines. Subject rankings in particular prove that several research fields of the University of Vienna are now already in the top 100, and some even in the top 50 in the world. For example, in the Shanghai Subject Ranking (2020), communication sciences are ranked 14th in the world, mathematics comes in 36th place, ecology is in the 51-75 tier and atmospheric sciences are in the 76-100 tier. In the Times Higher Education Ranking by subject (2020), six disciplines rank among the top 100 universities in the world: arts and humanities (30), law (68), business and economics (76), psychology (70), life sciences (84) and social sciences (86). A comparison with the Universities of Zurich, Munich and Uppsala shows that, in the current subject rankings, the University of Vienna is represented in most cases in fewer subjects among the top 50 (Shanghai) and the top 100 (THE) (see Table 3).

University	Shanghai Global Ranking of Academic Subjects (top 50)	Times Higher Education Ranking by subject (top 100)
LMU Munich	5 Physics 26, communication sciences 22, human biology 34, public administration 39, biology 46	8 Arts and humanities 16, physics 21, life sciences 31, business, economics and management 42, psychology 46, social sciences 67, education 54, computer science 58
University of Uppsala	3 Geography 39, political science 44, physics 45	3 Life sciences 36, social sciences 80, physics 87
University of Zurich	9 Human biology 7, ecology 11, communication sciences 18, business and economics 34, political science 27, geography 42, psychology 47, biology 48, mathematics 50	8 Business, economics and management 51, life sciences 59, social sciences 73, computer science 83, arts and humanities 85, education 86, psychology 95, law 98
University of Vienna	2 Communication sciences 14, mathematics 36	6 Arts and humanities 30, law 68, psychology 70, business and economics 76, life sciences 84, social sciences 86

Table 3: Comparison of the number of top positions in the two most visible international subject rankings of higher education establishments: 'Shanghai Global Ranking of Academic Subjects 2020 (top 50)' and 'Times Higher Education Ranking by subject 2020 (top 100)'. The results of technical and medical subjects were not included.

The University of Vienna is continuing to endeavour to be among the best 50 or 100 universities in the world in as many subjects as possible. The University of Vienna is aware, however, that its possibilities of achieving or improving its positioning in rankings of higher education establishments through its own initiatives are very limited. When assessing subject rankings, the different size of the subjects and the number of ranked universities per subject area must be taken into account. For example, 190 universities were considered when compiling the current THE ranking in the subject 'law', while 749 universities were considered for the subject 'computer science'. National framework conditions, too, are not taken into consideration accordingly in such rankings. For example, the largely open access to higher education establishments in Austria, with the resulting unfavourable student-teacher ratios, represents a disadvantage for Austrian universities.

If we compare the performance of all of the universities in the THE World University Ranking for 2020, it can be seen that the University of Vienna, which is currently in position 134, does not come close to the University of Munich (32), the University of Zurich (90) or the University of Uppsala (102) in this very visible ranking. In rankings that compare entire higher education establishments with each other, universities with medical facilities are often at an advantage.¹ On account of the specific publication cultures, the fields of research encompassing and adjacent to human medicine have the highest citation rates/frequencies in the relevant publication databases (e.g. Web of Science, PubMed, Scopus). This has a direct positive effect on the bibliometric indicators of many rankings and therefore on the performance of the entire universities.

2.2 Studying and Teaching at the University of Vienna

In the winter semester of 2019/2020 around 89,000 students² were admitted to the University of Vienna, 95.5 % of them for degree programmes.³ This means the University of Vienna is the biggest educational establishment in Austria and also in the German-speaking area. The University of Vienna enjoys international demand as an educational establishment: Students from other EU countries represent 19.6 % of the degree programme students⁴ and 25.8 % of the newly enrolled students⁵. Overall, the share of foreign students in the winter semester of 2019/2020 was 30 %⁶. This represents a high figure in an international comparison. Women are represented more strongly among students in comparison to the total population of Austria: The share of female students is 62.5 %⁷. In the academic year 2018/2019 there were 9,700 completed degrees. Graduation figures for bachelor's and master's programmes increased compared to previous years.

The University of Vienna offers a highly varied range of degree programmes, which enables students to focus on many individual areas. The range of degree programmes offered by the University of Vienna comprises 56 bachelor's programmes and approximately 150 extension curricula, which, as modules within a bachelor's programme, ensure that students receive an education in a wide range of subjects. 106 master's programmes, the teacher education programme in the bachelor's/master's structure with 27 subjects and one specialisation, 2 diploma programmes and 76 fields of doctoral research in 14 doctorate and PhD curricula round off the offer⁸.

To compare the student-teacher ratios at Austrian universities, the key figure 'students who take a certain number of examinations per professor and equivalent posts in FTEs' is used. With 69.9 students who take a certain number of examinations per professor and equivalent posts in FTEs (academic year 2018/2019), the University of Vienna has a significantly less favourable starting situation compared to other Austrian universities⁹. The 'new university funding scheme' from 2019 will now enable growth in professorships and tenure track positions, which will also gradually contribute to an improvement in student-teacher ratios as these positions are filled.

1 International rankings of higher education establishments and their significance for Austrian universities (Uniko 2017)

2 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5: 88,756

3 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5: 84,755 / 88,756 = 95.49 %

4 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5: 16,594 / 84,755 = 19.58 %

5 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5: 3,378 / 13,103 = 25.78 %

6 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5: (17,063 + 9,562) / 88,756 = 29.998 %

7 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5: 55,465 / 88,756 = 62.49 %

8 Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.2, <https://studieren.univie.ac.at/en/degree-programmes/>

9 Unidata, students who take a certain number of exams – student-teacher ratio by universities, retrieved on 3 Aug. 2020



In addition, the University of Vienna has made great efforts in recent semesters to increase the number of students taking exams. It is demonstrable that the greatest effects in increasing the number of students taking exams are caused by curricula that are being phased out. However, these are only rates of increase that are visible in the short term (1 to 2 semesters); moreover, these are side effects and not directly intended aims in connection with the change of a curriculum. Many of the newly taken measures are currently in an experimental phase; a numerical review of the effectiveness of the measures newly implemented since autumn 2019 is planned for the summer semester of 2021. In this context, however, reference must also be made to the study *‘Einflussfaktoren auf die Entwicklung der Studierendenzahlen’* (factors influencing the development of student numbers) by the Institute for Advanced Studies IHS (commissioned by the national universities association Universities Austria), in which an attempt was made to identify some factors causing the decline in degree programmes throughout Austria (degree programmes started, degree programmes in total, but also students who take a certain number of exams)¹⁰. The study shows that many influencing factors cannot be directly influenced by universities.

For several years now, various activities have been carried out to support students in the course of their studies in order to increase the number of students taking exams and boost the number of graduates. Research on study success indicates that study success is multifactorial. In this sense, it is important to implement a suitable package of measures for each degree programme on the basis of evidence.

The measures include tutoring and mentoring offers, writing support, support offers for bachelor’s students who have obtained more than 100 ECTS credits (100+ measures), increasing digital offers, etc. The project *‘Evaluation von Unterstützungsmaßnahmen im Studium EVUS’* (evaluation of support measures in studies) also aimed to investigate which measures have an effect on increasing the number of students taking exams, but here – also as a result of the strict methodological setting – no measures with clear effects in terms of increasing the number of students taking exams could be academically verified so far.

All degree programmes were already requested in 2018 to consider and implement measures in their own area to increase the number of students taking exams. In addition, a university-

¹⁰ IHS, *Einflussfaktoren auf die Entwicklung der Studierendenzahlen*, 2020

wide call for proposals was launched in 2019 for all degree programmes under the title Active Studying in order to initiate various projects to increase the number of students taking exams also through additional funding. Many of the projects are aimed at improvements in individual courses, some also at comprehensive measures in a degree programme. The measures were all launched in the winter semester of 2019/2020. The requirement was that after one year, the effects in terms of increasing the number of students taking exams should be reviewed in order to better identify which measures have proven successful.

Due to the COVID-19 pandemic, all courses and exams had to be switched to remote studying at the beginning of the summer semester of 2020. For this reason, the resulting schedules have changed and had to be adapted. Most of the projects were therefore extended until the spring of 2021 and will be analysed again in more detail after the winter semester of 2020/2021 to evaluate their impact. The effects are currently difficult to assess due to the coronavirus pandemic, partly because priorities have suddenly changed. Up to the beginning of the coronavirus pandemic, the development of students who take a certain number of exams showed very positive signals in terms of the achievement of the goals set in the performance agreement. After a sharp decline in the number of exams from mid-March 2020, the number of exams has been rising again significantly since the end of May 2020. The final figures as at the reference date 30 September 2020, which is relevant for the performance agreement, will be available at the end of 2020/beginning of 2021.

The specific systemic framework conditions of a university degree programme in Austria mean an international comparison is of limited value. Some information about this can be found in chapter 2.3: Financial Starting Point of the University of Vienna.

An Austria-wide comparison of relevant numbers of students reveals that the University of Vienna has around 31 % of all students¹¹ at Austrian universities, around 29 % of students who have taken a certain number of exams¹² and also around 28 % of completed degrees¹³. Chapter 2.3 'Financial Starting Point of the University of Vienna' presents details of the budgetary situation in comparison to other universities with a similar range of subjects.

It is clear that the University of Vienna is in a financially worse position than other Austrian universities.

With approximately 10,000 graduates per year, the University of Vienna makes a huge contribution to the output of the Austrian education system, and does this in a wide range of subjects. With the 'new university funding scheme' from 2019, the first steps have been taken so that the University can take another big step towards improving the student-teacher ratios. In the medium term, only funding of the University of Vienna, which is comparable with the universities mentioned several times in chapter 2: Starting Point (LMU Munich, University of Zurich, University of Uppsala), can lead to a lasting improvement of the degree programme and research situation.

11 Unidata, comparison of Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.5

12 Unidata; comparison of Wissensbilanz 2019 (intellectual capital report 2019), key figure 2.A.6

13 Unidata, comparison of Wissensbilanz 2019 (intellectual capital report 2019), key figure 3.A.1

2.3 Financial Starting Point of the University of Vienna

Financial framework conditions

Federal spending for scholarship and research in Austria has continued to grow steadily in recent years, and in the period 2014–2018 it rose by 9 %, i.e. by EUR 0.4 billion, to almost EUR 4.5 billion. At the same time, however, the consumer price index (CPI) rose by 8.7 % in the same period, i.e. the increase in federal spending for scholarship and research could essentially only cover the general consumer price increase. From 2019 onwards there has been a significant increase in expenditure on scholarship and research of around 7 % to just under EUR 4.8 billion. Part of this increase is due to the implementation of the ‘new university funding scheme’, which will lead to an increase of 13 %¹⁴ in university funding in the period 2019–2021.

	2014	2015	2016	2017	2018	2019
Nominal gross domestic product (EUR in billions)	333.146	344.259	356.238	369.899	386.063	400.628
Index (2014=100)	100.00	103.34	106.93	111.03	115.88	120.26
Total federal spending (EUR in billions)	75.765	74.719	76.452	77.457	78.536	79.174
Index (2014=100)	100.00	98.62	100.91	102.23	103.66	104.50
Subdivision 31 ‘Science and Research’ (EUR in billions)	4.078	4.119	4.278	4.362	4.463	4.783
Index (2014=100)	100.00	101.01	104.91	106.97	109.44	117.28

Table 4: Development of GDP, federal spending, budget for scholarship and research.

Source: Federal Ministry of Science, Research and Economy (BMBWF), *Statistisches Taschenbuch* (statistical yearbook), Table 6.1 based on www.unidata.gv.at (retrieved on 31 Aug. 2020)

Under these financial conditions of an essentially stagnating budget until 2018, the universities have shown slightly declining student numbers and slightly higher graduation figures in recent years.

¹⁴ Federal Ministry of Education, Science and Research (BMBWF), *Mehr Geld für gutes Studieren und Forschen an den Universitäten* (more money for good studying and research at universities), press release, December 2018; p. 2

Universities	2014	2015	2016	2017	2018	% 2014/18
Federal spending / higher education budget / universities (EUR in billions)	3.237	3.303	3.447	3.523	3.555	10 %
Students in degree programmes	277,508	280,445	280,783	278,052	268,586	-3 %
Average spending per degree programme student (EUR)	11,664	11,777	12,275	12,672	13,237	13 %

Table 5: Development of university budget and students in degree programmes (for the whole of Austria).
Source: Federal Ministry of Science, Research and Economy (BMBWF), *Statistisches Taschenbuch 2019* (2019 statistical yearbook), Table 6.2, p. 92

Universities	2014	2015	2016	2017	2018	% 2014/18
Federal spending / higher education budget / universities (EUR in billions)	3.237	3.303	3.447	3.523	3.555	10 %
Graduates at universities	34,300	34,539	35,864	34,978	35,655	4 %
Average spending per university graduate (EUR)	94,367	95,622	96,102	100,733	99,710	6 %

Table 6: Development of university budget and graduates (for the whole of Austria).
Source: Federal Ministry of Science, Research and Economy (BMBWF), *Statistisches Taschenbuch 2019* (2019 statistical yearbook), Table 6.2, p. 92

A significant improvement in the situation cannot be expected until the implementation of the 'new university funding scheme'. Depending on the university, budget increases of between 8 % and 17 %¹⁵ have been agreed in the 2019–2021 performance agreements. The University of Vienna was able to negotiate a budget increase of 17 % and therefore implement essential measures to improve the student-teacher ratios and to set new priorities in research.

Research expenditure in Austria is very much focused on applied research. Not least because of this, the government programme therefore also formulates the “strengthening of basic research”¹⁶ as a goal. The need for a greater concentration of research funds on basic research is highlighted in various studies. For example, in its Country Report 2016 the Research and Innovation Observatory (RIO) of the EU writes: “Funding for basic research in Austria is low compared to both EU and international innovation leaders. The relatively low amounts of competitive funding for basic research channelled through the Austrian Science Fund (FWF) limit the potential for the emergence of a critical mass in specific scientific fields. Since excellence in basic research strongly correlates with universities’ commercialisation capabilities, this may also hold back knowledge transfer and innovation.”¹⁷ A more recent OECD report also takes the same line and recommends an increase in the FWF budget: “Raise the budget of FWF to the level of comparable funding organisation in leading

innovating countries. This would allow FWF to step up its traditional funding activities.”¹⁸

The Austrian Science Fund (FWF) is Austria’s central institution for the promotion of basic research. Although its funding has increased in recent years, this has not been enough to stand international comparison. As FWF calculations show for 2017¹⁹, the FWF receives budget funds of around EUR 25 per inhabitant per year, while the budgets of comparable funding organisations have much higher funding: Switzerland (EUR 101), Finland (EUR 82), the Netherlands (EUR 55) and Germany (EUR 38).

From the perspective of Austrian universities, especially the University of Vienna, the following financial priorities are therefore paramount for the coming years: on the one hand, sustainable consolidation of the growth path beyond 2021, and on the other hand, an increase in the funding for basic research to meet European standards.

15 Federal Ministry of Education, Science and Research (BMBWF), *Mehr Geld für gutes Studieren und Forschen an den Universitäten* (more money for good studying and research at universities), press release, December 2018, p. 1

16 Government programme 2020–2024, p. 310

17 Research and Innovation Observatory (RIO) Country Report Austria 2016, p. 4.

18 OECD, *OECD Reviews of Innovation Policy: Austria 2018*, p. 40

19 FWF, *Pressekonferenz zur Lage der Forschung in Österreich* (press conference on the state of research in Austria), 24 April 2018, p. 9

University of Vienna in a national comparison

A comparison of the University of Vienna with other Austrian universities is possible only to a limited extent because, in particular, the distributions of subjects are different. Nevertheless, trends can be derived from such comparisons even if these are only rough comparisons.

After eliminating certain special items (in particular additional clinical expenditure), the higher education budget for universities in 2018 amounted to around EUR 3.0 billion (cf. Table 7). The University of Vienna receives a share of just over 15 % of this, but it supervises around 30 % of the students and is responsible for around 28 % of graduations. On account of the high supervision and resource intensity, the ratio of federal funds to students is much higher in particular at medical and technical universities than at the University of Vienna. A contrast with comparable Austrian universities in Graz, Innsbruck, Salzburg, Linz and Klagenfurt, however, shows clearly less favourable ratios at the University of Vienna:

University	Active students		Graduations		Federal funds	
	Ac. year 2017/2018		Ac. year 2017/2018		2018 (EUR in millions)	
Total	177,880	100.0 %	35,655	100.0 %	3.034	100.0 %
University of Vienna	50,915	28.6 %	10,037	28.2 %	464	15.3 %
University of Graz	18,177	10.2 %	3,358	9.4 %	202	6.7 %
University of Innsbruck	17,643	9.9 %	4,078	11.4 %	230	7.6 %
University of Salzburg	9,305	5.2 %	1,967	5.5 %	130	4.3 %
University of Linz	10,028	5.6 %	1,661	4.7 %	142	4.7 %
University of Klagenfurt	4,859	2.7 %	1,065	3.0 %	63	2.1 %
Medical universities	10,203	5.7 %	1,782	5.0 %	660	21.8 %
Technical universities	26,851	15.1 %	5,314	14.9 %	472	15.6 %
Universities of arts	7,986	4.5 %	1,513	4.2 %	304	10.0 %
Other universities	21,913	12.3 %	4,881	13.7 %	365	12.0 %

Table 7: Degree programmes in which students took a certain number of exams, graduations and federal funds.
Source: Federal Ministry of Science, Research and Economy (BMWFW), *Statistisches Taschenbuch 2019* (2019 statistical yearbook)

The student-teacher ratios clearly reflect this imbalance between budget funds and the number of students: At the University of Vienna this is 69.7 students who take a certain number of exams and therefore clearly above the average for the whole of Austria and also above the student-teacher ratios of comparable universities. More detailed analyses show that these suboptimal student-teacher ratios are not only due to the different available subjects but rather due to the fact that the University of Vienna, including identical subject areas (e.g. social sciences), supervises comparatively higher numbers of students and that there are clearly more unfavourable student-teacher ratios.

University	Students in degree programmes			Active students		
	Winter semester 2018			Academic year 2017/2018		
	absolute	per prof.	per teacher	absolute	prof. and equiv. post	per prof.
Total	268,586	108.1	18.7	177,880	4.538.2	39.2
University of Vienna	85,487	194.4	36.3	50,915	730.2	69.7
University of Graz	29,087	159.2	30.1	18,177	370.3	49.1
University of Innsbruck	26,526	105.1	22.8	17,643	410.7	43.0
University of Salzburg	14,996	102.2	20.8	9,305	263.4	35.3
University of Linz	19,913	153.6	30.0	10,028	246.0	40.8
University of Klagenfurt	10,333	147.1	26.8	4,859	145.0	33.5

Table 8: Degree programme students and students who have taken a certain number of exams in absolute figures and also per professor and teacher.

Source: Federal Ministry of Science, Research and Economy (BMWFW), *Statistisches Taschenbuch 2019* (2019 statistical yearbook)

The average federal spending per student and per graduate confirms this finding of clearly lower federal funds for the University of Vienna in comparison with other Austrian universities.

The indicated federal funds include the proportionate research funds contained in the global budget.

University	Average federal spending 2016–18	
	per student	per graduate
University of Vienna	5,238	46,161
University of Graz	6,742	60,418
University of Innsbruck	8,383	56,825
University of Salzburg	8,966	67,886
University of Linz	7,204	81,172
University of Klagenfurt	6,156	55,311

Table 9: Average federal spending per student and per graduate.

Source: Federal Ministry of Science, Research and Economy (BMWFW), *Statistisches Taschenbuch 2019* (2019 statistical yearbook)

In this respect, the ‘new university funding scheme’ from 2019 and the associated growth in professorships and tenure track positions represent an important step towards redressing the imbalance in student-teacher ratios between the University of Vienna and other Austrian universities and providing new impetus in research, which in turn will lead to higher demand for and acquisition of third-party funding.

University of Vienna in an international comparison

The University of Vienna compares internationally with the University of Zurich, the LMU Munich and the University of Uppsala. While in recent years the budget funds of the University of Zurich and the LMU Munich in particular were significantly higher than those of the University of Vienna in absolute terms, it is now apparent that the University of Vienna is catching up. In a 3-year comparison, the budget of the University of Vienna has increased faster than that of the compared universities, which have consistently recorded an annual budget increase of around 3%. Due to the ‘new university funding scheme’, above-average budget growth is still expected for 2020/2021. In order to not fall further behind in a comparison among top European universities, it seems all the more important that the funding for the next performance agreement period allows for a consolidation of the growth of the 2019–2021 period.

in millions	(2015) 2016		(2018) 2019		Dev. %	
	Local currency	EUR	Local currency	EUR	Local currency	EUR
University of Vienna		494		558		13 %
University of Zurich	637	585	699	628	10 %	7 %
LMU Munich		501		543		9 %
University of Uppsala	4,062	430	4,414	418	9 %	-3 %

Table 10: Development of the global budget in local currency and EUR

Sources (also for the subsequent tables):

University of Vienna: Statements of accounts 2016 and 2019, revenue excl. third-party funds according to intellectual capital report

University of Zurich: Performance reports 2016 and 2019, excl. third-party funds, excl. medicine/vet. medicine

LMU Munich: Facts and figures 2015 and 2018, excl. third-party funds, excl. clinical facilities

University of Uppsala: Facts and figures 2016 and 2019, excl. third-party funds, incl. medicine

In the comparison of public funding per student, the University of Vienna has caught up even more in the last three years, especially because the number of students has decreased slightly. Analogous to the national comparison, however, the compared international universities have, in some cases, significantly higher funds per student in absolute figures. Even if the number of students who take a certain number of exami-

nations (instead of the total number of students) of just over 50,000 were used for the University of Vienna, this imbalance would still exist – albeit to a lesser extent. A reliable comparison with Zurich, Munich and Uppsala is not possible in this respect because no student figures are available for these universities according to the number of exams taken.

	(2015) 2016			(2018) 2019			Dev. %	
	Students	Budget/student		Students	Budget/student		Local currency	EUR
		Local currency	EUR		Local currency	EUR		
University of Vienna	93,885		5,262	88,756		6,284		19 %
University of Zurich	21,595	29,520	27,078	21,904	31,890	28,666	8 %	6 %
LMU Munich	44,957		11,137	44,695		12,158		9 %
University of Uppsala	45,880	88,542	9,364	48,185	91,612	8,672	3 %	-7 %

Table 11: Development of the number of students and the global budget per student

A problem of the Austrian university system can be seen for the University of Vienna, for example, in a comparison of the global budget available per graduate. While at the University of Zurich, for example, there are around 4.5 times more funds available per student, this ratio is halved for graduates with a figure of around 2.5. In terms of this key figure, the University of Vienna is coming closer to the LMU Munich and the University of Uppsala, but this should not obscure the fact that the driver of supervision is primarily the number of students rather than the number of graduates, even though better student-teacher ratios help students complete their degrees.

	(2015) 2016			(2018) 2019			Dev. %	
	Graduations	Budget/grad.		Graduations	Budget/grad.		Dev. %	
		Local currency	EUR		Local currency	EUR	Local currency	EUR
University of Vienna	10,097	0	48,932	9,670	0	57,674		18 %
University of Zurich	4,493	141,884	130,145	4,280	163,203	146,703	15 %	13 %
LMU Munich	8,628	0	58,032	8,234	0	65,995		14 %
University of Uppsala	6,222	652,894	69,049	6,234	708,104	67,027	8 %	-3 %

Table 12: Development of the number of graduates and the global budget per graduate

As in the national comparison, the student-teacher ratio therefore appears to be the most meaningful key figure in teaching to show the high teaching performance of the University of Vienna. Even when using the more broadly defined key figure of professorships and equivalent positions, there is a clear need to catch up. The growth course of the 2019–2021 performance agreement

is not yet visible here because the additional professorships and tenure track positions will not be filled until 2020 and 2021. Even if these approximately 80 positions are taken into account and the comparison is made with the target figure of 812.5 professorships and equivalent positions by the end of 2021, there is still a need for further action to improve the student-teacher ratios.

	(2015) 2016			(2018) 2019		
	Students	Professorships	Stud./prof.	Students	Professorships	Stud./prof.
University of Vienna	93,885	416	226	88,756	478	186
University of Vienna Professorships and equiv. pos.		733	128		718	124
University of Zurich	21,595	432	50	21,904	450	49
LMU Munich	44,957	562	80	44,695	590	76
University of Uppsala	45,880	584	79	48,185	605	80

Table 13: Development of the student-professor ratio.

The framework conditions for research are very different in an international comparison, which can be seen in a comparison of the funding volume of the national research funding organisations. The funding volume of the FWF is much lower in comparison with other national European funding organisations. Since third party-funded research is strongly oriented towards basic research at the University of Vienna and 50 % of it is funded by the FWF, it is not very surprising that the University of Vienna, in comparison with the global budget and also with the number of professorships, attracts a smaller amount of third-party funding than the compared universities. The increase in third-party funding of the compared universities, but also the share of third-party funding in comparison with the global budget as well as the comparison of ERC grants (cf. chapter 2.1: Starting Point in Research) show that there is still room for improvement for the University of Vienna. In view of the growth course of the University of Vienna in the performance agreement period 2019–2021, it is to be expected that there will be stronger growth

in third-party funding in the next performance agreement period if the funding bodies relevant to us have sufficient funding volume.

in millions	(2015) 2016		(2018) 2019		Dev. third-party funding %		(2018) 2019
	Local currency	EUR	Local currency	EUR	Local currency	EUR	% TPF/GB
University of Vienna		80		84		5 %	15 %
University of Zurich	147	135	169	152	15 %	13 %	24 %
LMU Munich		159		192		20 %	35 %
University of Uppsala	2,538	268	2,886	273	14 %	2 %	65 %

Table 14: Development of third-party funds.

The Financial Situation of the University of Vienna

The economic framework conditions of the University of Vienna depend decisively on federal funding, which is specified by the legal regulations in the Universities Act and is determined for a period of three years in the performance agreement. The decision on the 'new university funding scheme' in 2018 reorganised these framework conditions so that the funding now

takes greater account of student demand (via the number of students who take a certain number of exams) and the capacities and performance in research (via the full-time equivalents of the permanent academic staff).

For the University of Vienna, the 'new university funding scheme' has meant a substantial increase of 17 % in the budget for the period 2019–2021.

Comparison perf. agr. 2016–18/perf. agr. 2019–21

in millions	Perf. agr. 2016–18	Perf. agr. 2019–21	Change abs./%	
Total budget of universities ¹	9,721	10,992	1,271	13.1 %
of which: global budget of universities ²	8,246	9,450	1,205	14.6 %
of which: global budget of University of Vienna ²	1,209	1,414	206	17.0 %

Table 15: Comparison of 2016–2018 performance agreement/2019–2021 performance agreement.

Federal Ministry of Education, Science and Research (BMBWF) press release on the conclusion of the performance agreement of December 2018

¹ Total budget incl. all additional funds such as tuition fee reimbursements, additional clinical expenditure, etc.

² Global budget acc. to the final version of the performance agreement, not included: construction projects, Linz Faculty of Medicine, additional clinical expenditure, (previous) tuition fee reimbursements, Danube University Krems, retained funds, in particular pursuant to section 12 (10)

Part of this budget increase ensures the maintenance of operations, while around EUR 120 million is available for new measures such as filling 80 additional professorships and tenure track positions. This growth course, i.e. an increase in permanent academic staff by around 10 % to around 2,000 full-time equivalents, is being consistently pursued to ensure the achievement of the goals of the 2019–2021 performance agreement in this area.

In the period 2019–2021 numerous investments are being made, which also concern the building infrastructure and result in significant improvements for teaching and research. Full operation of the new biology centre in St. Marx ('University of Vienna Biology Building', 'UBB') is planned for autumn 2021. An extension for the Faculty of Chemistry in Währinger Strasse was completed in 2020; another extension at the same location for physics will be built subsequently. Since October 2020 there has been a new location in Kolingasse to house, in particular, the new

professors and their working groups that can be financed due to the growth trajectory enabled by the 'new university funding scheme' and the 2019–2021 performance agreement.

The growth trajectory requires, on the one hand, sustainable funding by the Federal Government, which is basically provided by the methodology of the 'new university funding scheme', and, on the other hand, also requires the University to have a sound financial and earnings situation. In recent years, the University of Vienna has managed its finances in a balanced manner and has built up reserves to be able to finance facilities for the appointment of professors and for filling tenure track professorships as well as infrastructure measures. Significant risks in relation to the building infrastructure, especially compliance with employee protection regulations at all university locations, fire protection and accessibility regulations and the necessary renovation measures, are covered by provisions.

Relevant key financial figures, especially the degree of mobility, show satisfactory values and demonstrate that the University of Vienna has sufficient financial clout to be able to finance the various growth measures in the period 2019–2021.

Financial uncertainties exist in particular with regard to the effects of the coronavirus pandemic, which will affect the University of Vienna not only in 2020 but also in subsequent years. The University of Vienna expects considerable additional costs due to the delays in the ongoing construction and renovation projects, for instance. In addition, substantial digitalisation measures, for example, will result in additional expenses that were not planned to this extent.

From 2022 onwards, consolidation of the initiated growth is one of the priority goals of the University of Vienna. In any case, an increase in the global budget allocations slightly above the rate of inflation is necessary in the period 2022–2024 in order to sustainably finance the measures of the current period in addition to the continuation of current operations and, in some cases, to take additional measures to strengthen research and improve student-teacher ratios and active studying, but also, for example, to implement further digitalisation steps. In addition to this necessary budget growth, federal funding is required for those infrastructure projects that the University is not able to finance by itself. This applies in particular to the renovation of the Main Library at Universitätsring and the construction of a library depository required for this – this project is the main priority of the infrastructure roadmap for Austria’s eastern planning region (‘Bauleitplan OST’).

Outlook

In the current government programme for the period 2020–2024, the Federal Government is committed to “ensuring the best possible funding and planning security [...] for Austrian universities”²⁰. This needs to be done in any case for the next two performance agreement periods: “Universities will receive funding commitments with indexations for the next performance agreement periods until 2027.”²¹ Furthermore, the government programme provides for the “consistent continuation and further development of the ‘new university funding scheme’ with all initiated implementation steps”²².

The ‘new university funding scheme’ has enabled a growth path for teaching and research capacities since 2019. Student-teacher ratios can now be improved and research priorities can be set. Compared to the University of Zurich, but also to universities of excellence in Germany, the University of Vienna still has a lot of catching up to do in terms of student-teacher ratios and research capacities, but also in terms of access to sufficient research (funding) resources. In a national comparison, the University of Vienna, despite its growth path in the period 2019–2021, is the university whose student-teacher ratios remain significantly below the average of comparable universities.

For the University of Vienna, it is therefore crucial that the stipulations of the government programme can be adhered to and are backed by sufficient financial resources and that the specific situation of the University of Vienna with regard to the student-teacher ratios is taken into account in the distribution of funds. In addition to sustainable funding for universities, strengthening the financial resources for basic research is a high priority for the University of Vienna. In particular, the funding of the Austrian Science Fund (FWF) must be brought up to the level of comparable European research funding organisations in order to ensure access to sufficient competitively awarded funds in view of the increase in the number of professorships and tenure track positions.

20 Government programme 2020–2024, p. 304

21 Government programme 2020–2024, p. 305

22 Government programme 2020–2024, p. 305





3. Implementation of Core Tasks

3.1 Research and Career Development of Early Stage Researchers

3.1.1 Research

Research as a driving force for development

The University of Vienna wants to be one of the best research universities in Europe. Excellence in basic research is indispensable in order to belong to the leading international group. The University of Vienna also fulfils its responsibility by seeing the societal relevance of its research as an important task. It understands societal relevance as a contribution to anticipating and overcoming the economic, social and cultural challenges of the present – and especially those of the future.

The University of Vienna is a research university with a high international profile. In addition to the acquisition of high-ranking European and international research projects and prestigious academic prizes, as well as the opportunity to be published in high-ranking and much-cited publication media and renowned publishing houses, subject rankings also show that several research areas at the University of Vienna already rank among the top 100, and some even among the top 50 in the world (see chapter 2.1: Research at the University of Vienna). The comparison with other universities such as the LMU Munich and the University of Zurich (see chapter 2: Starting Point) shows that further efforts are necessary in order to achieve the desired goal of ranking among the top international universities (including in rankings of higher education establishments). To this end, it appears necessary, for instance, to increase the share of articles in much-cited journals (top 25 %) among the

publications of the University of Vienna (2019: 53.1 %), as far as this is possible while taking into account the subject cultures. Increasing the successful acquisition of high-quality third party-funded projects, especially in competitive procedures, should also help increase the share of third-party funding in the overall budget (2019: 15 %). There is also a particular focus on increasing the acquisition of projects of excellence, and here the indicator ERC grants/professor (see chapter 2.1: Research at the University of Vienna) needs to be improved in particular.

Excellent and relevant research requires sufficient funding, and third-party funding is playing an increasingly important role in the funding of research. Adequately funded national or international funding bodies, which can offer reasonable prospects of success and cover overheads, characterise the environment in which the internationally competitive universities are situated. This is why, in Austria, better funding for the FWF and, at the European level, more funds for the promotion of basic research are required. Here, however, it is not only a matter of acquiring additional funds but also of assuring quality because the submitted projects face competition where only the best national and international researchers can succeed. The University of Vienna therefore also views the successful acquisition of high-quality third party-funded projects, in particular those which are obtained in competitive procedures, as an expression of its competitiveness. Here, though, it also points out that without continuous basic funding of university research, innovative stimuli will fail to appear and the acquisition of third-party funds will, in the long term, neither be possible nor productive. State-of-the-art basic equipment is required in order to carry out the necessary preparatory work and be able to make competitive research proposals in the first place.

Research and profile development

The University of Vienna has a historically developed wide range of subject areas in research. The research profile can therefore not be restricted to just a few areas because there also always has to be institutional responsibility towards all other academic fields. Nevertheless, the University should not avoid the question of what it stands for and what research areas are its particular strengths. This question is relevant for the public image, for the correct adjustment of the self-perception and for resource decisions.

The profile development of the University of Vienna in the area of research is based on an analysis of the existing profile strengths, which are based on numerous key research areas of the faculties (see chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships). The key research areas of the faculties have been prioritised with the help of output indicators. These indicators include the competitive acquisition of significant basic research-oriented third party-funded projects (e.g. ERC grants, collaborative EU, FWF, Vienna Science and Technology Fund (WWTF) projects) and third party-funded projects that are open to application (e.g. FFG, CD Laboratories, COMET and Laura Bassi Centres), the awarding of prestigious academic prizes (e.g. START Prizes or Wittgenstein Awards) or institutions with particular international visibility, such as the European Law Institute (ELI). Key research areas of the faculties can also be characterised by particularly good performance in current subject rankings such as the QS, THES or Shanghai rankings.

The Rectorate is constantly developing criteria, especially with regard to greater emphasis on societal relevance in the research conducted at the University of Vienna. In addition, the Rectorate has also drawn on knowledge transfer activities and exploitation activities (licences, spin-offs). COST projects are included as an important instrument for initiating collaborative EU projects. In addition, research projects that contribute to the implementation of the 17 Sustainable Development Goals (SDGs) set by the United Nations and projects that promote communication, education and participation (citizen science) are also considered.

The key research areas of the faculties associated with the above indicators have been grouped together in cross-faculty research specialisations of the entire University. These cross-faculty research specialisations therefore show those areas of the University of Vienna which, on account of their success in national and international competition, stand out in their visibility. They are regularly checked in terms of their defining criteria and, if necessary, are amended or supplemented. The joint (further) development of

valid and meaningful quality criteria is important for the University of Vienna in order to do justice to all disciplines and be able to take more recent developments into consideration. Currently at the University of Vienna there are the following ten cross-faculty research specialisations.

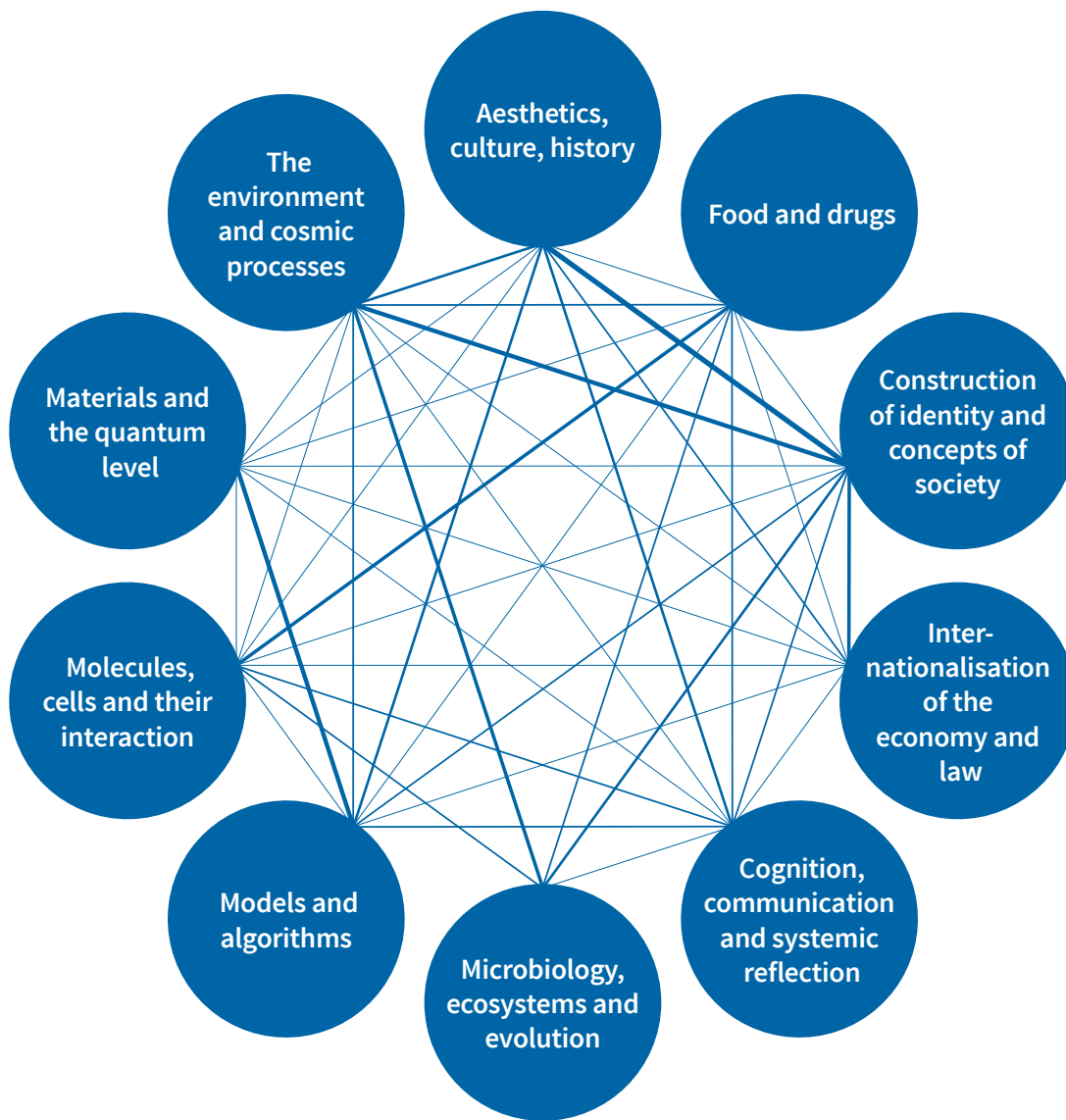


Diagram 7: Cross-faculty research specialisations of the University of Vienna.

- Aesthetics, culture, history:** Research by the Faculties of Historical and Cultural Studies and Philological and Cultural Studies is concentrated in this cross-faculty research specialisation. The focus is on the historical and cultural dimensions of human coexistence, their social framework discourses and their presentation in the media. This cross-faculty research specialisation takes into account the historical and cultural significance of Vienna as a location from a European and global perspective. Eight ERC grants, two Wittgenstein Awards, two FWF START Prizes, one FWF Young Independent Researcher Group, one FWF special research programme, two FWF doc.funds projects, three WWTF projects, one EU project and one COST project can be attributed to this cross-faculty research specialisation. Interdisciplinary networking, also beyond the University of Vienna, takes place through participation in the Austrian Center for Digital Humanities (ACDH). ESFRI participation provides access to large-scale European infrastructures.

Knowledge is also transferred via a citizen science project, for instance. Basic research findings from the associated subject areas help achieve the UN SDGs 10 (Reduced Inequalities) and 16 (Peace, Justice and Strong Institutions), for example.

- Food and drugs:** The cross-faculty research specialisation comprises research which deals with the synthesis, isolation, structural analysis and development of complex natural and active substances (e.g. cancer drugs), functional and bioactive food ingredients and their effect on the human body and also the identification of new active substances from nature. The Faculties of Chemistry and Life Sciences are involved here. Four ERC grants, one FWF thematic doctoral programme, one FWF special research programme, eight EU projects, three WWTF projects, five FFG projects and two CD Laboratories have been acquired. ESFRI participation provides access to large-scale European infrastructures. Academics from this cross-faculty research specialisation

are involved in one COMET Centre. Five spin-offs have emerged within this cross-faculty research specialisation. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDGs 2 (Zero Hunger) and 3 (Good Health and Well-Being), for example.

- **Construction of identity and concepts of society:**

This cross-faculty research specialisation, which belongs to the Faculty of Social Sciences, the Faculty of Historical and Cultural Studies and the Faculty of Philological and Cultural Studies, deals with questions of identity construction on an individual and collective level (e.g. family, generations, citizenship) as well as with politics and political communication. Two ERC prizes, five EU projects, one COST project and three FFG projects can be assigned to this cross-faculty research specialisation. ESFRI participation provides access to large-scale European infrastructures. Knowledge is transferred to society through five citizen science projects, for instance. One subject area in this cross-faculty research specialisation stands out with a top position in the Shanghai Ranking. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDGs 1 (No Poverty), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 10 (Reduced Inequalities), 11 (Sustainable Cities and Communities) and 16 (Peace, Justice and Strong Institutions), for example.

- **Internationalisation of the economy and law:**

The Faculty of Business, Economics and Statistics and the Faculty of Law deal with the increasing Europeanisation of the economy, politics and society, in particular also with the internationalisation of markets and institutions and the legal challenges and risks arising here. Another focus deals with the digital economy and digital law. One FWF thematic doctoral programme, one FWF doc.funds project, one WWTF project, five EU projects, one CD Laboratory and the European Law Institute (ELI) can be assigned to this cross-faculty research specialisation. Academics from this cross-faculty research specialisation are involved in three COMET Centres and one Josef Ressel Centre. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDGs 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production) and 16 (Peace, Justice and Strong Institutions), for example.

- **Cognition, communication and systemic reflection:**

Involved in this cross-faculty research specialisation are the Faculty of Life Sciences, the Faculty of Psychology, the Faculty of Social Sciences, the Faculty of Philological and Cultural Studies, the Faculty of Historical and Cultural Studies and the Faculty of Philosophy and Education. The focus is on studying cognitive and neuronal processes of humans and animals and the basic principles of perception and behaviour. Within this cross-faculty research specialisation, three ERC prizes, two START Prizes, one FWF special research programme, one FWF thematic doctoral programme, two FWF doc.funds projects, eleven WWTF projects, three EU projects and two FFG projects have been acquired. ESFRI participation provides access to large-scale European infrastructures. Several subject areas in this cross-faculty research specialisation stand out with top positions in the THE Ranking, and one subject area has a top position in the Shanghai Ranking. Knowledge is transferred through five citizen science projects and one educational project, for instance. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDGs 5 (Gender Equality), 10 (Reduced Inequalities) and 16 (Peace, Justice and Strong Institutions), for example.

- **Microbiology, ecosystems and evolution:**

This cross-faculty research specialisation, essentially supported by the Faculty of Life Sciences and the Centre for Microbiology and Environmental Systems Science, concerns microbiological, evolutionary, developmental and ecological processes which are essential for an understanding of our planet. This cross-faculty research specialisation, with a total of nine ERC grants, one Wittgenstein Award, one FWF doc.funds project, one FWF Young Independent Researcher Group, one EU project, two WWTF projects and one FFG project, is also very successful. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDGs 3 (Good Health and Well-Being), 13 (Climate Action), 14 (Life Below Water) and 15 (Life on Land), for example.

- **Models and algorithms:**

The behaviour of complex and dynamic systems is described with the help of mathematical models and made calculable with the help of computer algorithms. The Faculties of Mathematics, Business, Economics and Statistics, Physics and Computer Science are involved in this cross-faculty research specialisation. Currently, one ERC

grant, one Wittgenstein Award, four FWF START Prizes, twelve WWTF projects, three FWF thematic doctoral programmes, three FWF special research programmes, two EU projects and two FFG projects can be allocated to this cross-faculty research specialisation. Academics from this cross-faculty research specialisation are involved in five COMET Centres, one CD Laboratory and one Steinbeis Centre. Two spin-offs have emerged within this cross-faculty research specialisation. International visibility is demonstrated, among other things, by a top position in the Shanghai Ranking.

- **Molecules, cells and their interaction:** This cross-faculty research specialisation, in which the Centre for Molecular Biology/Max Perutz Labs and the Faculty of Chemistry are involved, concerns molecular biology, cell biology and biochemistry questions and also the computational simulation of the clarification of complex biological structures. Five ERC grants, one FWF START Prize, one FWF thematic doctoral programme, one FWF doc.funds project, five FWF special research programmes, four WWTF projects and one CD Laboratory enable and promote this cross-faculty research specialisation. Revenues from licences help strengthen research. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDG 3 (Good Health and Well-Being), for example.
- **Materials and the quantum level:** In this cross-faculty research specialisation the Faculties of Physics and Chemistry work on theoretical questions of quantum physics and its technological applications, e.g. quantum cryptography and quantum computing and on materials science questions ranging from the quantum level to the nano level and on to the examination and development of sustainable materials for environmentally friendly technologies. Seven ERC grants, one FWF START Prize, one FWF special research programme, one FWF doc.funds project, one FWF Young Independent Researcher Group, eight EU projects, nine FFG projects, one FWF knowledge communication project and three CD Laboratories are behind this cross-faculty research specialisation. Academics from this cross-faculty research specialisation are involved in six COMET Centres. Three spin-offs have emerged within this cross-faculty research specialisation. Revenues from licences help strengthen research. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDG 7 (Affordable and Clean Energy), for example.

- **The environment and cosmic processes:** This cross-faculty research specialisation combines the Faculty of Earth Sciences, Geography and Astronomy, the Faculties of Life Sciences and Physics and the Centre for Microbiology and Environmental Systems Science in order to examine environmental processes on the Earth's surface and in the atmosphere and, thus, to gain a better understanding of the dynamic of processes in complex systems and be able to make corresponding predictions. In addition, cosmic processes, the origin and formation of stars, galaxies and planets are examined with the help of observation stations such as the ESO (European Southern Observatory) and with the help of modern high-performance computers (Vienna Scientific Cluster). Four ERC prizes, three WWTF projects, six EU projects and six FFG projects have been acquired here. Two subject areas in this cross-faculty research specialisation stand out with top positions in the Shanghai Ranking. ESFRI participation provides access to large-scale European infrastructures. Academics from this cross-faculty research specialisation are involved in one COMET Centre. Four spin-offs have emerged within this cross-faculty research specialisation. Knowledge is transferred through three citizen science projects and one educational project, for instance. Basic research findings from the subject areas associated with this cross-faculty research specialisation help achieve the UN SDGs 11 (Sustainable Cities and Communities), 13 (Climate Action), 14 (Life Below Water) and 15 (Life on Land), for example.

Other excellent research initiatives and future-oriented fields of research are described in more detail in the section 'Institutionally developing inter-faculty research' and in chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships.

Strategic goals and specific instruments

Promoting and facilitating third party-funded research

Excellence and relevance of research are decisive guidelines for the targeted volume and structure of third-party funding to be acquired. In addition to independent basic research, the University is increasing the acquisition of third-party funding in basic research that is open to application and applied research of high quality. The University of Vienna recognises that objectives and measures for the acquisition of third-party funding must be discipline-specific. Ideally, both excellence and relevance can be combined. However, there may be areas where this does not apply to all projects. In such areas, a balance between the two characteristics should be sought in

order to achieve a balanced third-party funding structure overall.

The goal of increasing the third-party funds raised needs to be achieved while observing the principle of **'quality before quantity'**. Funds should only be raised for projects that are in line with the University's mission as an education and research institution. They must meet the ethical standards of the University and the requirements of state aid law.

Application-oriented research of high quality contributes to the **innovation cycle**. Such research addresses economic, social or cultural problems that can only be solved by applying modern academic methods and procedures. In turn, addressing these problems raises questions which are of academic interest and therefore also advance academic knowledge. Third-party funding should therefore also be seen in the context of knowledge exchange and technology transfer (see chapter 3.4: Impact of the University on Society – Exchange of Knowledge).

The quality of third party-funded projects is measured, among other things, by the opportunities they offer **early stage researchers** for developing their academically oriented career.

The promotion of basic research (including applied research) is a priority task of the University. It is therefore prepared, in addition to research funded from its global budget, to support externally funded basic research projects from its global budget if necessary. This is particularly true of FWF projects, whose **overheads** the University currently has to cover itself. However, EU state aid rules prohibit using the global budget to cross-finance applied research whose results are exploited by third parties with a commercial orientation. Here, coverage of the full costs is required in any case, and the aim is to make a contribution to the overhead costs.

In the coming years, the University of Vienna intends to increase the acquisition of third-party funding from quality-oriented, especially **competitive procedures** and expects corresponding efforts from its employees. Such third-party funds

- enable research projects that are the basis for publications in prestigious academic journals and publishing houses. Such publications contribute to the academic discourse, are cited and are an indicator of academic excellence;



- are an accolade for the quality of the researchers and their research. They therefore also aid quality assurance in research and enhance the reputation of the University;
- support early stage researchers by providing postdoctoral researchers and especially doctoral candidates with financial security in the form of a paid position and integrating them in an active research environment;
- serve as a key indicator for the formation of cross-faculty research specialisations at the University of Vienna. Cross-faculty research specialisations pool together innovative and successful research within the University and offer starting points for internal research funding (e.g. creation of research platforms and research networks);
- contribute to the innovation cycle in basic research that is open to application and high-quality applied research. Examples are projects usually within the framework of the 2nd pillar of Horizon Europe, the FFG or Christian Doppler Laboratories.

To increase the third-party funding activities of its academics, the University of Vienna wants to continue to rely on tried and trusted support structures. Here there is a particular focus on the acquisition of **EU projects**. As part of Horizon Europe (2021–2027), the University of Vienna plans to continue and strengthen the successful focuses established in the excellence and mobility programmes of the ‘1st pillar’ which are running in this area (in particular ERC grants, Marie Skłodowska-Curie Fellowships). A particular focus when supporting academics in the acquisition of ERC grants is placed on areas that are promising due to their size and potential for receiving ERC grants. Identification (scouting), activation and support (mentoring) of academics with ERC grant potential plays a major role here. In the more application-oriented basic research of the 2nd pillar (‘missions’, ‘Global Challenges and Industrial Competitiveness’), there is high potential for increasing third-party funding. Through this research, the University can also contribute to the Sustainable Development Goals (SDGs) and to the fulfilment of its social responsibility. The 3rd pillar aims to bring innovations more quickly to the market and therefore create growth and employment. Although the University sees only limited potential here due to the profile of its researchers, these programmes should be advertised more strongly internally.

Effective **measures** to increase third-party funding activity are based on a culture of appreciation for acquiring third-party funding. It conveys that third-party funding is essential for the success of the University and its members, especially early stage researchers, as well as

for the education of doctoral candidates. Since the benefits, necessity and opportunities for acquiring third-party funding vary greatly from one subject area to another, such a culture must be developed on a discipline-specific basis and supported appropriately through suitable measures, especially for early stage researchers.

Important measures, but ones which are only effective in the long term, concern the recruitment of academics who are motivated and suitable for the acquisition of third-party funding. Demonstrable third-party funding successes and the potential to acquire prestigious grants and major projects will play an increasingly important role in new professorial appointments, in the evaluation of candidates in the tenure track procedure and in the allocation of resources.

The University will analyse the profiles of academics with regard to current and future funding opportunities, make them individually aware of the possibilities for acquiring third-party funding, advise them and support them in the application process, for example through the work assistance programme ‘Freiräume schaffen’ to aid academics who are applying for third-party funding. Leaders of successfully acquired projects of excellence can apply for teaching relief and receive further funding financed from overhead income. Support through centralised and decentralised services is intended to cover the entire project duration and, in particular, relieve coordinators of EU projects of administrative tasks.

Enhancing cross-faculty research specialisations

Cross-faculty research specialisations at the University are fields of research with the highest international level and visibility which can also be seen by good performance in international subject rankings (see chapter 2.1: Research at the University of Vienna). The particular current designation of the University of Vienna’s excellence in fields of research as cross-faculty research specialisations needs to be continued in the coming performance agreement periods. The underlying indicators have to be subject to continual reflection and adaptation, and external views also have to be taken into consideration here. In addition to their role in the public image of the University of Vienna, cross-faculty research specialisations also need to be used as the basis of strategic resource decisions. In this way, whether a subject area belongs to an existing or a potential new cross-faculty research specialisation will also have an influence on the dedication of professorships as part of rolling development planning (see chapter 3.5.3: Human Resources Planning and Procedures). Existing and new cross-faculty research specialisations also need to continue to be promoted

by announcing additional tenure track positions and by making investments in academic and spatial infrastructure (see chapter 3.7: Infrastructure). Furthermore, they can also be the starting point for innovative interdisciplinary professorships (see chapter 3.5.3: Human Resources Planning and Procedures and chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships). Cross-faculty research specialisations can also provide a link between new (interdisciplinary) master's programmes and thus, by means of research-led teaching, ensure early stage researchers work in the areas of excellence at the University of Vienna. In the area of teaching, too, the process of profile development and the establishment of networks in the available range of courses will therefore be boosted in the medium term (see chapter 3.2: Studying and Teaching). By moving parts of the life sciences and the Centre for Microbiology and Environmental Systems Science to the new 'University of Vienna Biology Building' near the Vienna Biocenter Campus, many subject-related and methodological connecting factors are arising within the University of Vienna and, with the key players at the location (in particular the Austrian Academy of Sciences ÖAW, the Research Institute of Molecular Pathology IMP, companies), a research location is emerging which operates clearly beyond the national borders in the field of molecular biology, a field which, today, is already one of the cross-faculty research specialisations of the University of Vienna.

Establishing new strategic priorities of the University in research

In addition to expanding existing strengths, the University of Vienna also wants to establish new strategic priorities in research in a target-oriented manner and advance into innovative fields of research. These are areas which have a lot of potential but still require additional investments to build critical mass in order to become a cross-faculty research specialisation of the University of Vienna and be able to catch up with international leading-edge research. Examples of areas with high development potential at the University of Vienna include neuroscience, the area of data science and digital humanities/social sciences, and microbiome research in cooperation with the Medical University of Vienna (see also chapter 3.3: International and National Cooperation Projects). The required volume of additional resources in order to generate critical mass differs depending on the specific subject and must not only refer to the University of Vienna. Research networks can be designed flexibly and are intended to give initial impetus to innovative areas with high potential (such as currently cognitive neuroscience, data science, environmental research). This concerns areas that cover many different topics and are located between several faculties or even between

several universities in the Vienna area. Research networks are drivers of academic innovation and starting points for the further development of potential areas. Their flexible design options are reflected in their various forms. For example, for a limited period of time a research network was set up in the field of environmental research involving numerous academics from the entire University, an inter-university research network for research into the work of Elfriede Jelinek was established together with the Music and Arts University of the City of Vienna, and a virtual cluster in the field of cognitive neuroscience was set up together with the Medical University of Vienna and the University of Veterinary Medicine, Vienna. The joint cluster is intended to bring together academics from the three universities who are active in cognitive neuroscience, including through joint workshops and seminars, with the aim of initiating joint third party-funded projects.

Potential areas can be promoted by means of the subject dedication of professorships as part of rolling development planning (see chapter 3.5.3: Human Resources Planning and Procedures and chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships), with additional tenure track professorships, which can also be advertised in competitive procedures in particularly innovative areas and in order to build bridges between emerging research fields, and with additional investments in academic and spatial infrastructure (see chapter 3.7: Infrastructure). Like the existing cross-faculty research specialisations, these areas can also be strengthened by interdisciplinary and new professorships (see chapter 3.5.3: Human Resources Planning and Procedures and chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships) and made more visible internationally. Research platforms set up in a competitive procedure (see the section on 'Institutionally developing inter-faculty research') can initiate particularly innovative, interdisciplinary projects in research areas that have not yet been tapped. In particular, projects can be funded that do not yet have a chance of being funded by conservatively acting funding bodies. Special consideration is given to these aspects when evaluating applications. If successful, research platforms are then the starting point for further third party-funded projects that consolidate the research activity. In addition, the University is considering further funding opportunities for unconventional or risky research approaches.

Increasing the impact of research results

The University of Vienna also fulfils its social responsibility by seeing the relevance of its research as an important task. It understands relevance as a contribution to anticipating and overcoming the economic, societal and cultural challenges of the present – and especially those of the future.

The University of Vienna wants to use its expertise and broad academic basis to help solve the major societal challenges of our time. These are defined, for example, in the EU Framework Programmes (especially ‘societal challenges’ or in the future ‘missions’²³) and the Sustainable Development Goals (SDGs) of the UN. The University of Vienna is helping to create the academic basis for finding solutions to the major challenges. The major societal challenges of our time illustrate that the University of Vienna, with its wide range of subjects, can make a significant contribution to solving complex global problems with multidisciplinary approaches. It is also necessary to transfer the results of university research to an even greater extent to society, culture and the economy (see also chapter 3.4: Impact of the University on Society – Exchange of Knowledge).

The University of Vienna is committed to the principle of open science (see chapter 3.4: Impact of the University on Society – Exchange of Knowledge). Open science pursues the goal of making scholarship more easily accessible to a larger number of people inside and outside the academic world. This includes, on the one hand, product-oriented approaches which make (interim) results as openly accessible as possible, such as open access and open data. On the other hand, the opening of science processes can also be understood here, including citizen science, for example. Open science increases the comprehensibility and acceptance of scholarship and the impact of the results on society (see also chapter 3.4: Impact of the University on Society – Exchange of Knowledge). In the area of open access, the University of Vienna will continue to focus on green open access, i.e. storing publications in the University’s own repository and encouraging the switch from journals published at the University of Vienna to open access. The aim here is to continue to increase the share of open access articles among the total number of journal articles (2019: 14.8 %).

The visibility and significance of the academic output of the University of Vienna also increase by improving the quality of the academic publi-

cations by its scholars. The University of Vienna endeavours to increase the share of high-quality publications in internationally recognised specialist journals, series and book publications. Indicators of high-quality publication media here are, in particular, peer review and indexing in relevant publication databases (such as SCIE, SSCI, AHCI, Scopus). Where appropriate for the subject, belonging to the best 25 % of journals (Q1) of a field of research (according to the Journal Citation Index) can also be used as a criterion for high-quality journals. The share of articles in Q1 journals among the total number of journal articles indexed in the Web of Science needs to be increased based on the figure of 53.1 % (2019). The University of Vienna will discuss and determine measures to increase the quality and number of publications including as part of target agreements and monitoring discussions with the faculties and centres. The indicators regarding publication achievements also need to be part of the performance-oriented allocation of funds already introduced in some organisational units; this would have to be discussed within the framework of the target agreements.

In this context, the good performance of the University of Vienna in the Nature Index is also worth mentioning²⁴. This annual ranking by the publishing house Nature is based on the number of journal articles published in one year in 82 renowned scientific journals (e.g. Nature, Science, Cell, Journal of the American Chemical Society, Physical Review A-D). It focuses strongly on the natural and life sciences and therefore comprises only part of the research output of the University of Vienna. The University is currently (mid-2020) the highest-placed Austrian institution in this ranking.

Institutionally developing inter-faculty research

In addition to the indicated cross-faculty research specialisations, the research networks and research platforms are important instruments for both the development and establishment of research excellence. They include forward-looking fields of research, contribute to profile development and illustrate the broad disciplinary orientation of the University of Vienna. Innovative cooperation networks across subjects and faculties help overcome monodisciplinary thinking and build bridges between disciplines.

The internal support mechanisms have been further developed compared to the last *Development Plan* on the basis of previous experiences.

23 https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/missions-horizon-europe_en
24 <https://www.natureindex.com>



In the view of the Rectorate, research platforms as an instrument have essentially proven their worth. The duration was extended from three to four years on a one-off basis because it is often not possible to fill all positions immediately at the start of the research platform/funding period. In particular, this should give predoctoral candidates enough time to complete their doctorate.

The instrument of research networks was upgraded and made more flexible. In this way, research networks can be set up with a flexible duration and, where appropriate, can also be provided with longer-term resources. The (partial) allocation of positions is also possible for the duration of research networks. Research networks can also be established between several universities (see section: Establishing new strategic priorities of the University in research) and be the starting point for joint submissions in the context of a possible initiative of excellence (see chapter 3.3: International and National Cooperation Projects).

The instrument of research centres will not be continued, but already existing projects can run until the end.

To strengthen cooperation with the Medical University of Vienna, both universities have launched joint inter-university cluster projects. These projects build new bridges between basic research and patient-oriented research ('bench-to-bedside'). They are set up for a period of three years as part of competitive selection processes with international review (see also chapter 3.3: International and National Cooperation Projects). They have proven successful and need to be expanded if possible.

Exploiting the innovation potential of digitalisation in research

Through digitalisation academics change research questions, research topics, research fields, research methods, research practices and research infrastructures as part of an international academic community. Researchers often draw ground-breaking contributions from the diversity of the academic disciplines represented at the University of Vienna in interdisciplinary and inter-faculty research activities addressing digitalisation. Numerous professorial appointments in the field of digitalisation increase the potential of the University of Vienna to develop new research fields related to digital technologies and the shaping, effect and governance of digital transformation. Thus, research conducted at the University of Vienna also provides the

foundation for the development of expertise in digitalisation. This expertise can advance teaching and research itself and exert further impact on the economy and society.

At the same time, digital technologies are being increasingly used as indispensable instruments in all academic disciplines. Digitalisation leads to a wider range of methods and tools used in research to collect, prepare, analyse, interpret and jointly use data, for example. Digital technologies allow for substantial improvements in research practices, especially in collaboration and joint generation of knowledge among researchers. They result in far-reaching changes in the modes and processes of publication, communication and contextualisation of research results as well as their translation to facilitate effective and sustainable innovations in the economy and society.

3.1.2 Career Development of Early Stage Researchers

The University of Vienna has developed strategies and concepts to train the next academically educated generation for a professional activity inside and outside a university.

Doctoral candidates and postdoctoral researchers are a group of early stage researchers who are of vital importance for the development of research at the University of Vienna. For the next generation of academics, framework conditions need to exist which help them make essential contributions to the academic world. Postdoctoral researchers need to develop their own academic profile in research and teaching and qualify for an academically-oriented career, see chapter 3.5: Employees.

Doctoral education

Doctoral education qualifies candidates to carry out independent academic work. Its principle is education through research. It is initially for supporting doctoral candidates to help them develop and become integrated in the international academic community as young academics (in the sense of early stage researchers), to carry out research independently with good supervision and, in this way, acquire professional and also personal competences. In addition, they also need to acquire a series of key competences which are useful for their further professional career, either inside or outside universities.

Doctoral education is a high priority at the University of Vienna. This is also expressed by the fact that the funds used for this purpose have been significantly increased as part of the new university funding scheme and that the structure of education has been fundamentally reformed.

As part of this reform, the University of Vienna has created flexible structures with doctoral schools that meet international standards and the highest quality criteria. They offer structured education programmes and increase the mutual obligations of supervisors and doctoral candidates. They are intended to provide both disciplinary and interdisciplinary education.

In the medium term, the University aims to introduce doctoral schools that cover all subject groups if possible. The schools are funded based on indicators (by 'matching' introduced doctoral positions and completed doctorates). In addition, the uni:docs programme contributes to the funding of doctoral schools in a modified form.

Doctoral schools have a minimum number of authorised supervisors who are active in research and their doctoral candidates to enable socialisation and the development of a peer culture. They develop selection procedures for the admission of doctoral candidates, which usually involve interviews by a committee.

Schools can be disciplinary or thematically oriented. They have formalised supervision structures and quality assurance processes that are based on international standards. They are characterised by the fact that each doctoral candidate has access to more than one supervisor, actively participates in the academic discourse and interacts with other doctoral candidates. The education includes not only the acquisition of relevant methods and subject knowledge but also familiarity with the norms of the subject.

Regular exchange within the schools takes place in the form of suitable formats (e.g. research seminar, excursion, retreat). Schools ensure that doctoral candidates are integrated in the academic community, e.g. through presentations at international conferences and workshops and through publications in formats suitable for the subject.

Within the framework of the respective legal possibilities, it needs to be examined whether new instruments could also be introduced, such as a combined master's and doctoral programme which leads either to a master's degree or a doctoral degree (see also chapter 3.2: Studying and Teaching). Such an extensive paradigm shift requires detailed discussions and can be seen in different subject cultures and from different perspectives.

Postdoctoral researchers

Postdoctoral researchers are service providers in teaching and research who should be supported and funded on a targeted basis. The University of Vienna employed approximately 1,200 postdoctoral researchers in 2019, of which slightly more

than half are funded by third parties. The group of postdoctoral researchers is heterogeneous in terms of their subject orientation, type (global budget vs third-party funding), and scope and duration of their employment. The postdoctoral phase usually sets the course for a further successful academic career. The University of Vienna therefore actively supports its postdoctoral researchers in building up an international network during this qualification phase, which is usually limited in time, in proving themselves academically through excellent publications, in quickly developing an independent academic profile, also through particularly innovative research topics, and in acquiring third-party funding.

The University aims to

- attract highly qualified postdoctoral candidates,
- increase the satisfaction, performance and productivity of postdoctoral researchers,
- motivate female postdoctoral researchers in particular to pursue and succeed in an academic career,
- motivate postdoctoral researchers to acquire third-party funding, as well as
- create successful and satisfied academics leaving the University who, in the long term, form a worldwide network at research institutions and in an academically oriented career, and strengthen the reputation of the University as an attractive employer and workplace.

The University of Vienna has therefore developed a comprehensive postdoctoral strategy, which is also in the context of the advancement of women and the acquisition of third-party funds. The strategy includes measures for all postdoctoral researchers, but also measures to support female postdoctoral researchers in particular. In this way, the University of Vienna is also countering the phenomenon of the reduction in the proportion of women observed in some disciplines, starting in the postdoctoral phase ('leaky pipeline').

Important elements of this strategy are as follows:

- The Berta Karlik Fellowship promotes the international mobility of outstanding female academics by providing scholarships for stays abroad at top universities of 4 to 9 months.
- The Marie Jahoda Grant supports outstanding female academics who interrupted their employment at the University of Vienna due to caring responsibilities no longer than 2 years ago and wish to continue their academic career.

- The University of Vienna provides incentives to obtain Marie Skłodowska Curie (MSC) Fellowships, in particular by funding an additional year (three years instead of two) for postdoctoral researchers who come to the University of Vienna with this funding.

3.2 Studying and Teaching

3.2.1 Studying at the University of Vienna

The University of Vienna currently offers 178 degree programmes, including 56 bachelor's programmes, two diploma programmes, 106 master's programmes, 14 doctoral programmes and also 38 university continuing education and training programmes (in the form of non-degree programmes). Approximately 10,000 graduates complete their studies every year at the University of Vienna and enter the Austrian and international labour market and education area. With their research and teaching expertise, 6,900 academics shape the range of degree programmes available at the University of Vienna, the biggest research and educational establishment in Austria.

Using the variety of disciplines and degree programmes:

The University of Vienna sees high value in the subject diversity of its range of programmes, and the students in particular see this as an especially attractive aspect of the study location 'University of Vienna'. This means studying beyond the limits of individual subjects is also possible. The wide range of subjects available at the University of Vienna will open up varied study options for students and, as a result, entirely new profiling opportunities will also develop with regard to career options. One essential means of ensuring broad basic training in bachelor's programmes and promoting vertical mobility is extension curricula (EC). The University of Vienna offers around 150 extension curricula, which are integrated as modules within bachelor's programmes. In addition to extending the competences and increasing the employability of the graduates, these modules also increasingly have a 'bridging function' to master's programmes with a new subject orientation. It is not only at the individual level that the wide range of disciplines provides choices, however. In addition, by interlinking academic disciplines and forming special focuses, new programmes can also be developed again and again.

Promoting active, autonomous studying:

Studying requires students themselves to actively process study contents. Studying at university means students face the challenge of shaping their learning processes autonomously, dealing with the subject contents and methods intensively and, on this basis, participating in academic discourse. Teachers support the learning process of the students by teaching key contents, methods and competences in the respective subject and guiding the students to help them shape their own learning process. They support students so they can actively deal

with learning contents on the basis of the students' experiences and knowledge backgrounds. Teachers encourage students to develop their own topics, questions and positions and also to follow up on these as part of their studies. Teachers therefore improve the motivation of the students to meet the requirements of studying at university, promote feelings of success and, not least, the pleasure of gaining knowledge. Under the title Active Studying, projects in the area of teaching were initiated in 2019 at the faculty and degree programme levels in order to develop targeted and customised measures that should result in increased learning and study success in terms of increasing the number of students taking exams. The University is therefore fulfilling its task of supporting students in the best possible way in active studying and will review these projects with a view to their impact on the number of students taking exams. The aim is to find out which measures demonstrably increase the number of students taking exams in order to derive strategies for the future.

Enabling research-related studying:

Based on the principle of research-led teaching, the teachers, as far as possible and if appropriate for study progress, integrate their research results directly in the course and incorporate the students as early as possible in current research processes. The University of Vienna's commitment to research-led teaching needs to be expressed in the structure and in the contents of the degree programmes. In the teaching at the University, new findings, theories, models and methods are taught on a sound basis, are critically questioned and are also further developed in the discourse between students and teachers.

Taking advantage of the opportunities of digitalisation for studying:

The use of digital teaching/learning formats increases the scope for shaping learning processes. Digital technologies enable a variety of teaching formats; an important goal is to promote and supervise learning overall as an active process of the students via classic and digital courses and opportunities for interaction. The University of Vienna continues to focus on the expansion of open educational resources and their use in blended learning courses and self-organised learning processes. In this way, students can develop topics and questions independently. In addition, communication both among students and also between students and teachers can be enhanced and intensified via digital instruments. Furthermore, digitalisation and related questions concerning critical reflection on it and active shaping of it are integrated into many courses as a research subject and as a social topic at the same time. Digital transformation is increasingly affecting life and work. Therefore, on the one hand, appropriate digitalisation competences that are integrated in the academic ed-

Education of all degree programmes are central for the next generation. On the other hand, digital possibilities also offer a way to better integrate studying into the – digitally enriched – everyday life of students and therefore also increase study feasibility. The COVID-19 pandemic in 2020 has shown how didactic, organisational and technical measures in digitalisation can be implemented in a very short time. The University of Vienna sets itself the goal, also when implementing its Digitalisation Strategy, of conducting a detailed discussion on the associated experiences, effects and expectations. Another goal is deciding to what extent the measures taken in this period can/should be maintained, consolidated and if possible and justifiable in organisational, legal and technical terms integrated into ‘normal’ everyday student life.

Experiencing the international community:

Students at the University of Vienna are part of a large and diverse community of around 89,000 students and come from around 140 different countries. The University of Vienna’s participation in networks such as ERASMUS and partnerships with the leading universities in the world open up many possibilities of exchanges. This enables students to gain international and inter-

cultural experiences. This is also relevant with regard to future career prospects: a stay abroad improves job prospects in the future. In addition, in the course of digitalisation, we are creating new opportunities for international exchange to enable ‘internationalisation at home’ either as a complement or (in times of travel restrictions, for example) as a replacement.

Learning social responsibility during studies:

Enthusiasm for academic knowledge and understanding its contribution to solving social issues must already be generated before studies begin. This is where the University of Vienna comes in with formats such as the Children’s University (see chapter 3.4: Impact of the University on Society – Exchange of Knowledge). In the coming years, the University of Vienna also wants to make societal and practical relevance more visible in studies and be involved in initiatives which educate by means of a well thought-out link between the academic world and practical involvement (service learning). The goal of such projects is, additionally, the further development of social practical fields. This means that, in the teaching at the University, academic learning is combined with social involvement in the interest of the capacity for



innovation of society overall. In addition, there is particular focus on entrepreneurship education in order to teach implementation practices to a new generation of potential company founders and to give them an academically founded basis so they can recognise and also accept the challenges of the future (cf. chapter 3.4: Impact of the University on Society – Exchange of Knowledge).

Experiencing diversity:

The University of Vienna sees the social, cultural, linguistic, religious, gender, ethnic and regional diversity of its students as an asset and a challenge and abides by the principle of equal opportunities. It therefore sets itself the goal of encouraging all groups of students to give their best-possible performance and increase their chances of study success. Tried and tested measures ((writing) mentoring, tutoring) need to be further developed and expanded according to needs and also have to specifically address students with a first language other than German. Students are trained for writing mentoring; they offer writing groups in subjects where they help students deal with the different phases of the academic writing process (e.g. dealing with literature, structure, line of argument, text production, revision of texts, academic language).

If possible, such measures should also be available as online offers for a larger group of students. Studying which, to a certain extent, enables students to carry out an occupation is supported by the wide range of teaching formats (block-mode courses, courses at off-peak times, e-learning).

The gender distribution in individual subjects varies greatly. In general, achieving a gender balance is an important goal for the University of Vienna, especially in STEM programmes, where entry-level mentoring programmes have been established and will be further expanded. Gender-specific demand also reflects socially-related expectations and cannot be changed by the University of Vienna alone. However, it will actively inform female students, especially in male-dominated disciplines, and offer accompanying support structures at an early stage. By educating secondary-school teachers, the University of Vienna can play an active role that is effective in the long term and help ensure that gender-specific assumptions in connection with the choice of a degree programme are already countered at school with corresponding sensitivity and targeted support. Content on gender and diversity is integrated into the teacher education curricula accordingly.

Enabling graduates to have a good entry into the labour market:

The goal of the University of Vienna is to train active, self-sufficient students and, at the end of their education, to ultimately have highly qualified graduates. In teaching, the key tasks of the University of Vienna are to allow students to pursue their studies without delay and provide high-quality content with the aim of positioning its graduates successfully on the national and international labour markets. Education at the University of Vienna aims to qualify students academically, professionally and personally so that, for their part, they can make a contribution to the further development of society. Well-founded fundamental knowledge in a subject is taught by research-based and method-oriented teaching. In the area of digital and social transformation, the University of Vienna is also developing teaching formats as part of the 'Teaching Digital Thinking' project in order to expand the competences of its students and graduates (e.g. digital literacy, understanding digital transformation and the associated social changes, integrating digital competences also in the curricula). The University of Vienna supports its students on their way towards graduation so that they are prepared – as well-qualified, methodologically adept graduates who are able to think independently – for the requirements of the world of work in general and for the academic labour market.

Creating framework conditions for a further improvement in the quality of degree programmes:

The University of Vienna provides high quality in its degree programmes and expects its students to use the introductory and orientation period to check or confirm their choice of programme. The commitment between the University of Vienna and the students in the sense of mutual responsibility is strengthened on many levels. In this way, the University assumes responsibility for the adequate provision of places in courses and for supervision and expects students to make use of these resources and to pursue their studies actively and on their own responsibility. In relation to the number of new entrants, the number of graduates is too low. The University of Vienna endeavours to improve the student-teacher ratios and therefore contribute to increasing the number of graduates. From the very beginning of degree programmes, it therefore helps ensure there is higher probability of study success. The use of new digital possibilities for students to plan their studies better and in a more goal-oriented way, as well as to give recommendations and feedback on the University's planning of degree programmes, is in an initial pilot phase. Newly implemented entrance exam procedures and admission procedures are also geared towards the goal of increasing the probability of study success.

3.2.2 Studying Today

Before studies: “Studying – yes? But what?”

A wide range of people begin a degree programme. The percentage of people who do not take up studies directly after obtaining their secondary-school leaving certificate is rising. Orientation periods, a job or stays abroad come in between. For example, there is an increase in the number of new entrants who, after completing a university entrance qualification examination, begin their studies or want to expand the knowledge they have gained from working life in specific areas. The available university data is also supported by the results of the 2019 Student Social Survey conducted by the Institute for Advanced Studies (IHS) on behalf of the Federal Ministry of Education, Science and Research (BMBWF).

The range of academic disciplines at the University of Vienna can be roughly divided into the following fields of study. Every field of study has a wide choice of study options:

- Law and economics
- Society, politics and media
- Mathematics and computer science
- History and cultural studies
- Natural and life sciences
- Psychology, health and sports
- Languages, literature and regions
- Philosophy, education and theology

The University of Vienna helps students find the right degree programme with an extensive support offer. As well as online information about degree programmes and internal events at the University, e.g. open days and the ‘uniorientiert’ fair (on site and digital), the University of Vienna is also represented at **study information fairs**. At these events there is the possibility of making direct contact with subject representatives and students in higher semesters in order to find out about the contents and structures of the desired degree programme. In sample lectures, live lectures, smaller information events and excursions, prospective students can find out about the subject and get a taste of studying.

Student lifecycle and support programmes offered by the University

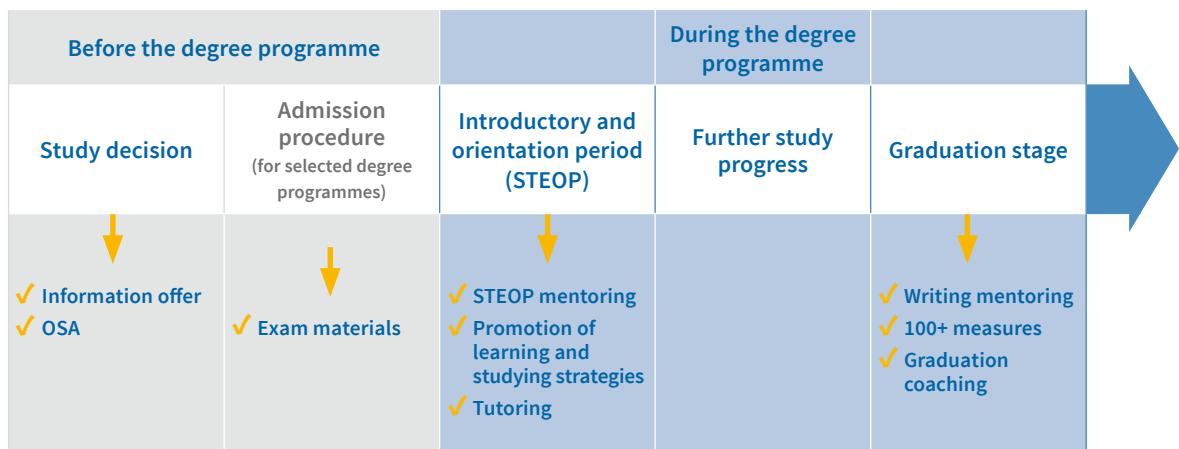


Diagram 8: Student lifecycle and support programmes offered by the University.

In order to effectively support the transition from school to university for the increasingly heterogeneous group of prospective students, in 2019 the University of Vienna expanded the range of subject-specific online self-assessments (OSAs), which have been established for some time, by adding an **interdisciplinary online tool** (‘uni:check’). uni:check is an orientation tool that identifies study success factors and uses tasks, videos and individualised feedback to convey aspects of general (cross-disciplinary) study ability as well as characteristics of a university or the University of Vienna as a study location in a target group-oriented manner. It is aimed at young people who are considering

whether they should study at the University of Vienna or whether they would like to take a different path. The two instruments, uni:check and OSA, are conceptually interlinked and enable a realistic view of the requirements associated with studying in general as well as the requirements of individual subjects. This helps ensure an informed and thought-out career decision or choice of degree programme. In particular, people from areas of society where studying is not a matter of course should also benefit from the easy access to this extended information service.

To provide orientation in the subject for prospective students, in many degree programmes an **online self-assessment (OSA)** is available which provides information about the fundamental contents of the degree programme and gives prospective students feedback on the extent to which their expectations about the programme correspond with reality. The results of the OSA are evaluated individually (this is EDP-supported) and are passed on to the prospective students as part of detailed feedback. The OSA motivates participants to reflect and acts as a complement to personal career and study guidance. The University of Vienna endeavours to provide OSAs for all degree programmes with high numbers of new entrants and/or drop-outs and, in a further step, OSAs for all subjects. OSAs serve as orientation before starting a degree programme.

Entrance exam procedures should only be carried out where absolutely necessary. In several degree programmes at the University of Vienna, entrance exam procedures and aptitude tests are carried out. These are based on different legal foundations. In the case of degree programmes where there is a very high level of demand, **entrance exam procedures** are carried out if the number of prospective students exceeds the number of available study places. The task of entrance exam procedures goes beyond selecting new entrants based on numbers according to the law and, by actively dealing with the subject, aims to give applicants the possibility to check their own interests and motivation and therefore help them make a long-term study decision. In further consequence, the entrance exam procedures should help to increase the rate of students who have taken a certain number of exams and also the number of graduates. Findings as part of an extensive evaluation of the entrance exam procedures and aptitude tests point in this direction: They do not only show that, since the introduction of the entrance exam procedures and aptitude tests, the rate of students who take a certain number of exams in the corresponding subjects has risen but also that the procedures and tests overall enjoy a high level of acceptance in the target group (test fairness, organisation, etc.).

Aptitude tests do not stipulate any restriction in numbers. They are currently carried out in teacher education and sport science programmes. In teacher education, the entrance exam procedure is in three stages (OSA, written aptitude test and individual aptitude and advisory discussion for applicants who do not reach the necessary 30 % of points in the aptitude test). The aim is to enable prospective students to better assess their own competences. In sport science programmes, athletic aptitude is tested because physical fitness is essential for study success in addition to academic competences.

The goal of the University of Vienna is to extend aptitude tests as an aid for the orientation of prospective students to those degree programmes in which there is a lack of clarity regarding the learning outcomes, contents and methods as well as high drop-out figures. The aptitude tests are evaluated with consideration of the advancement of women and anti-discrimination. Here the Universities Act provides for mandatory aptitude tests to be completed prior to admission.

Current degree programmes with entrance exam procedures/aptitude tests

Bachelor's/diploma programmes with entrance exam procedures/aptitude tests: Business Administration, Education, Biology, Chemistry, English and American Studies, Nutritional Sciences, Computer Science, International Business Administration, Social and Cultural Anthropology, Teacher Education, Pharmacy, Political Science, Psychology, Journalism and Communication Studies, Law, Sociology, Sport Science, Transcultural Communication, Economics, Business Informatics.

Completing a bachelor's (diploma) programme

All degree programmes – apart from Law and Catholic Theology – are offered today in the form of a bachelor's programme with the possibility of one or more subsequent master's programmes. The system changes introduced with the Bologna framework, which were initiated at the start of the 2000s, are largely completed. The Bologna structures are also used in the remaining areas to differentiate the range of available degree programmes: In the field of law, a master's programme in Business Law has been established in cooperation with the University of Klagenfurt. In addition, there is the intention, triggered by discussions as part of the 'Zukunft Hochschule' (future of university) project organised by the Federal Ministry of Education, Science and Research (BMBWF), to establish a bachelor's and master's programme in International Legal Studies. In the field of theology, with Religious Education and Religious Studies, there have been programmes offered in line with the Bologna framework for some time.

A bachelor's programme teaches academic core and basic competences. Its purpose is the academic preparation for future employment and qualification for professional activities. Bachelor's programmes focus on teaching basic competence in the specific subject with the aim of learning how problems have to be handled and solved with an academic approach (methodology).

STEOP: bridge towards studies

As the first stage of studies, the introductory and orientation period (STEOP) introduces the students to the teaching and learning culture at the University. It is another instrument enabling new entrants themselves to check their choice of degree programme and their suitability for the corresponding programme using the available subject overview and early performance requirements. It is at the same time an invitation to study and as such also counteracts (gender) role stereotypes as well as discriminatory learning and research cultures. As a curricular element, it makes a key contribution to quality assurance in studies and teaching, builds a bridge towards studies and therefore improves the starting options. In addition, it also makes planning easier for the University and students. With the further development of the introductory and orientation periods, the University of Vienna endeavours to pay even more attention to connections between groups of subjects in order to find synergies with the STEOPs of the fields of study that are closely connected, to use these synergies and to also enable students to change their degree programme at an early stage without a huge additional workload.

The University of Vienna supports its new entrants, in particular in subjects where there are high numbers of newly enrolled students, by using students who are in higher semesters as mentors and tutors. These provide knowledge and experience to make it easier for the new entrants to find their way during everyday academic life. In this way, students in higher semesters can also gain their first experience in imparting subject-specific knowledge and learn for themselves how to pass things on. In addition, teachers can encourage successful students and inspire them to pursue their own subject if they are suitable and interested. Young students, right at the beginning of their studies, therefore, have a better understanding of how they can study successfully in the respective subject.

Mentoring helps students get to know fellow students (either in the same semester as them or in higher semesters), and communicates about studying strategies and also specific aspects of learning at the University. The tutors support new entrants to help them with subject-related socialisation and so they gain a better understanding of the specific subject contents, in many cases by using electronic tools. Since the mentors and tutors are an important link between students and teachers, greater attention should be paid to their qualification.

The University of Vienna expects its students, after they have completed the STEOP phase, to make a conscious decision to endeavour to graduate in their main degree programme.

If students are attracted by other degree programmes, this is a desirable additional effect and side effect, but it also carries the risk for students of being distracted from their main degree programme, so it is therefore only recommended if they continue to actively pursue their main degree programme.

Explorative, research-based learning

In the course of their degree programme, students learn how to approach questions academically. Here, as an example, they become familiar with research processes and begin to understand their own learning as a research-based activity, even if the findings and results do not yet represent 'new knowledge' for the specialist community. Learners should also enjoy academic work, appreciate academic knowledge as a specific approach for dealing with questions, and also learn to apply this in a targeted manner. As part of a society which is essentially based on knowledge, which is characterised by continuous change and in which complex problems have to be solved, this will also be one of the most important foundations for future professional activities.

Linking academic knowledge with partners outside the University from many different areas has to be promoted in projects. This exchange enables the development of new ways of thinking and gives the University of Vienna the option to also examine current topics of the economy and society in its teaching.

Individual profile development opportunities

In its bachelor's programmes, the University of Vienna already offers many possible choices, in particular in the form of **extension curricula** (modules comprising 15 ECTS credits or 30 ECTS credits). These serve the purpose of extending competences in an area not related to the subject in question. They help students to think outside the box and, based on their interests, to discover other subject areas. This means students become qualified for many different requirements in their later working lives. Extension curricula (EC) also represent an important link to non-consecutive or interdisciplinary master's programmes. In the course of a bachelor's programme, students, with the selection of an extension programme, can already prepare for a master's programme whose subject is not directly related, they can increase the options for vertical mobility and expand interdisciplinarity. The University will continue to design extension curricula for current questions in order to be able to take up new topics and challenges at short notice. In addition, extension curricula should also be integrated in those curricula in which there are not any so far.

Extension curricula are evaluated every three years and are regularly subject to further development. In this area it is very easy to respond to current challenges and implement innovative new formats.

Graduation as a goal

The University of Vienna endeavours to continue to provide particularly supporting measures to bachelor's students who, after completing the introductory and orientation period, have obtained more than **100 ECTS credits** and have therefore completed more than half of their degree programme, so that they can keep an eye on completing their studies. The measures concern, in part, the organisation of the degree programme (e.g. design of the available courses) and, in part, content considerations. This can also be done, for example, with greater personal advice by directorates of studies/StudiesServiceCenters/teachers to strengthen the bond and commitment, to ensure students complete the outstanding exams and to promote anticipatory study behaviour (e.g. planning of ERASMUS mobility or of extension curricula for transition to master's programmes whose subject is not directly connected). A goal-oriented graduation by the students (supported, for example, by offers such as writing mentoring) is the declared objective in particular in this stage.

Competences of bachelor's graduates

Bachelor's graduates, in addition to subject-specific and methodological knowledge, also have analytical ability and joined-up thinking, domain-specific communication skills and problem-solving skills and as employable graduates, they can proactively shape innovative social and economic developments. They are able to solve unforeseen problems in complex contexts.

Options after the (first) degree

After completing a bachelor's programme, graduates again face a decision. With the transition to the Bologna framework, a turning point was created with bachelor's programmes which takes into account the objective of individually shaping one's own educational pathway.

After graduating, students face questions such as whether they should gain work experience, what type of employment comes into question and/or whether they should start a master's programme directly afterwards.

If students opt for a master's programme, they often ask themselves the question: Should I choose a master's programme in a related subject? Should I change university? Should I begin an interdisciplinary master's programme with a new content focus? Is a non-consecutive mas-

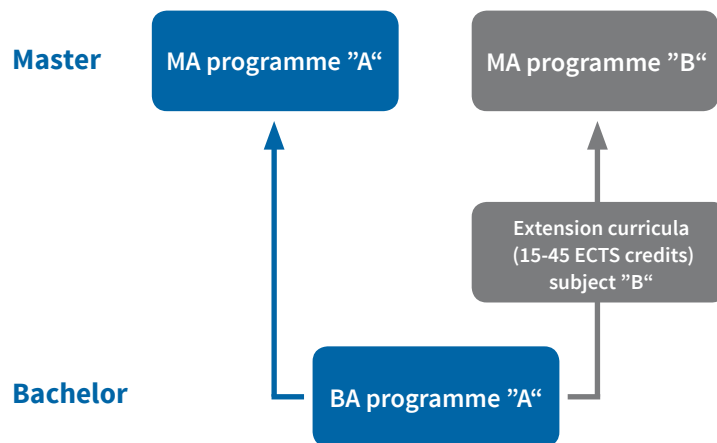
ter's programme in a new area (if the bachelor's degree allows it) possibly of interest?

In particular with regard to master's programmes, the University of Vienna is in competition for prospective students with other educational establishments in Europe and wants to be attractive for these students.

The aim is to continue to develop the range of available programmes so that non-consecutive studying is possible.

With this in mind, the University of Vienna has developed a Master Access Guide, in particular to be able to show the possible non-consecutive choices in a transparent manner. The Guide is regularly updated with the addition of new paths in the available courses between bachelor's and master's programmes. Here the prerequisites for access to the various master's programmes and also information about preliminary/subsequent programmes and requirements are shown. By displaying the connections within the University of Vienna, this information is also provided for degree programmes of other educational establishments if these are of relevance for the University of Vienna.

A model for non-consecutive study options:



The diagram must be seen as a model: information on specific degree programmes can be found in the Master Access Guide.

Diagram 9: Model for non-consecutive study options.

Master's programme

Master's students in particular need to familiarise themselves as early as possible with independent research-oriented thinking and acting and be supported in the development of research competence. If the aim is an academic career, a master's degree is a requirement. For specialised activities or for carrying out management tasks in a company, completion of a master's programme is also a big advantage.

Typology of master's programmes:

- **More in-depth knowledge in one's own subject:**
On the basis of the foundations acquired in a bachelor's programme, the knowledge is extended in the student's own discipline by selecting core subjects and, in some areas, there is specialisation.
- **Lateral entry in an unrelated subject:**
Students look for new opportunities with individual compositions of competences.
- **Interdisciplinary offer:**
Students and teachers of various subjects pursue a coordinated cross-subject programme. Students are often admitted to these programmes through selection procedures.

Master's programmes focus on qualifying graduates

- for **relevant professional practice:**
Students may enter into a profession by making productive use of the acquired knowledge/skills of the master's programme. The degree therefore offers education for various occupational fields;

- for a **predominantly academically oriented career**, especially with a view to a doctoral programme.

At the end of a master's programme comes the independent academic research of a topic under supervision in the form of a master's thesis. The required possibility of in-depth focus and specialisation therefore also belongs to the profile-defining characteristics of a master's programme. This is most likely to succeed if students become as familiar as possible with individual steps of a research process beyond learning and reading about research results, can practise these if possible and also learn to carry out research themselves under supervision.

From the master level onwards in particular, the University of Vienna is in international competition for prospective students and it is one of its major concerns to persuade particularly motivated and committed students to choose one of its master's programmes and also doctoral programmes (see also chapter 3.1.2: Career Development of Early Stage Researchers).

In particular when writing a master's thesis, students face similar challenges as students in a doctoral programme. With this in mind, even if there is currently no legal foundation for this, considerations about a combined master's/PhD programme in selected degree programmes are of major relevance for the future. In terms of study law, the prerequisites should be created for being able to directly follow a bachelor's degree with such a programme. This can increase the attractiveness of entering research as early as possible. In the Anglo-American countries this is standard practice and here the turning point in the course of the studies is found in

bachelor's programmes on the one hand and also in master's/PhD programmes on the other. Such a restructuring of the framework of studies requires a broad discussion process with all responsible bodies of the University of Vienna and stakeholders.

To provide an attractive offer to internationally oriented students, in the coming years work is being done to push ahead with the expansion of the master's programmes which are offered solely in English or where at least one path in the programme can be completed in English.

In addition, the University of Vienna is endeavouring to work together with teachers and supervisors to continue to develop specific support offers for students who are in this early stage of independent academic research. The possibility of short-term scholarships, for example, would be particularly welcome at this stage of writing a master's thesis so that students can concentrate better on completing it. The University of Vienna will examine possibilities for financial support in this stage and, if necessary, make conceptual considerations.

3.2.3 Challenges/ Cross-Sectional Topics

Focus on the digital challenge

Digitalisation not only profoundly changes the world of work but also the University of Vienna and its teaching practice, of course. In particular, the change to remote studying in the summer semester of 2020 increased the use of digital teaching and study rooms enormously, both among teachers and students. In just a few weeks, completely new possibilities for holding digital exams were also opened up. Many teachers used this time frame to expand their own digital competences in teaching and intend to continue to use what has proven successful also in the next semesters. The University of Vienna will continue to see itself as a university offering face-to-face teaching in the future, but will take the digital possibilities with it as it heads into the future, provided they are perceived as an asset. Moreover, it will develop teaching/learning concepts that combine the strengths of a university offering face-to-face teaching with the possibilities of digital teaching and learning. Counteracting the digital gender gap is an important task in this regard. The University also aims to enable its students to develop a critical and constructive mindset and competences for actively shaping digitalisation in academia, the economy, culture and society.

Digital tools are now – even more than before – part of the everyday life of today's students and teachers. The University of Vienna faces the

challenge in its teaching of sustainably complying with the dynamics of digital change and the associated expectations of its members, and of continuously developing digital innovations for the further development of teaching that are integrated into the worlds of experience, design and discourse of the many different academic disciplines represented at the University of Vienna.

- It is necessary to provide high-quality learning options with a useful, also carefully scheduled mix of attendance and on-line learning, self-organised, interactive and collaborative, synchronous and asynchronous learning options for students who are characterised by increasing diversity (living conditions, origin, level of knowledge) and changed media and communication habits. Video streaming, video conferencing and digital interactions with and between students should be integrated into teaching as a supplement, provided that this is meaningful in terms of subject matter and didactics and is possible in terms of data protection, copyright law and technology.
- With this and with digital options for the organisation of degree programmes and their administrative support, the University of Vienna also enables learning and organisation of studies at any time and in any place. This flexibilisation will also further improve study feasibility for students.
- Teachers are called upon to adjust their teaching even more than before to the learning outcomes of students, to promote as many students as possible in their in-depth competence acquisition and lead them to independent researching tasks in line with research-led teaching. In this process, teachers can use digital media constructively and intensify interactions in attendance courses.
- In addition, there is the requirement of increasingly opening up teaching towards open educational resources (including MOOCs), which make it possible to reuse the materials of colleagues from the same discipline in a legally unobjectionable manner and enable the students to make up for knowledge gaps from before and during the studies or allow the self-organised expansion or consolidation of teaching content.
- The University of Vienna is faced with the task of making university-wide support options available to teachers to enable them to implement digital innovations to further develop and enhance their teaching. High-quality, digitally enabled and supported courses can only be widely integrated if teachers are sufficiently supported both in

the use of the technical tools and in the development of the teaching formats. Webinars will also be increasingly used in this area.

- The University of Vienna strives to incorporate topics associated with digital development and competences required in this context in curricula of all degree programmes and to integrate them into teaching. This should be done in any case with a view to the subject requirements of the degree programme, including through the focuses that were established when new professorships were created in various fields.
- In addition, interdisciplinary offers have been/will be created that enable students to acquire competences in the field of digitalisation (e.g. in the extension curriculum for Digitalisation), which go beyond technical aspects and also address legal, ethical and social topics or teach generic skills (such as critical media use, searching skills, etc.).

The University of Vienna is committed to using open educational resources (OER) taking the subject cultures into account, has established services for their development, archiving and reuse, and wants to expand them further. OER can be used flexibly in different formats (in the flipped classroom or (inter-)national classroom, in university-wide and joint online offers) and are also accessible to the non-university community of specialists (teachers/learners in higher education institutions/schools) for reuse. OER resulting from teaching can additionally promote knowledge transfer to the broad public (cf. chapter 3.4: Impact of the University on Society – Exchange of Knowledge, lifelong learning) and attract international students.

Students also gather their own experiences with digital research processes as part of research-oriented teaching (undergraduate and graduate research) and are introduced to actively using (freely available) current research findings (open access, open data) and digital tools.

Teacher education and training

The institutions which cooperate in the North-East Schools' Group (the University College of Teacher Education of Christian Churches Vienna/Krems, the University College of Teacher Education in Lower Austria, the University College of Teacher Education in Vienna, the University College for Agrarian and Environmental Pedagogy, the University of Vienna) implemented a joint teacher education programme at secondary level (general education) in the winter semester of 2016/2017. The new bachelor's and master's programme combines teacher education-related subject-specific academic, subject didactic and educational requirements with the requirements

connected with teaching practice in schools. The programme aims to prepare students for their future tasks in a high-quality and in a profession-oriented and research-led manner.

The Centre for Teacher Education (ZLB) at the University of Vienna is the organisational and coordinating interface for the tasks related to teacher education. In its work, it acts as a link between the cooperation partners in the Group and external institutions (such as the boards of education, schools, etc.). The Centre also encourages the formation of networks between subject didactics centres and attempts to bring the four pillars of teacher education closer together, initiate joint research projects and promote early stage researchers.

The collaboration with cooperation schools was further expanded in 2019. In addition to the close cooperation with the seven 'Kooperationsschulenplus' and the collaboration with the existing cooperation schools, six new cooperation agreements were concluded in 2019 (two each with academic secondary schools (AHS), new secondary schools (NMS) and VET schools). The further expansion as well as the extension of expiring agreements of cooperation schools of different school types are planned. An expansion in the direction of a 'researching school', which provides for cooperation on the basis of a development and research concept conceived between the school and the University, is envisaged from 2021.

Cross-sectional topics that have become the focus of interdisciplinary research and correspond to the rapid changes of our globalised knowledge and innovation society are taken up at the Centre for Teacher Education:

- digital transformation and its implications for teaching and learning;
- educational processes in the context of migration, inclusion, globalisation and sustainability;
- changed forms of organisation and structures of schools as a prerequisite for the teaching of tomorrow.

These cross-sectional topics are also considered in the education of future teachers. Digital transformation and the associated changes in media technology place new demands on educational processes, which must support digital sovereignty (digital literacy) in particular. The coronavirus pandemic has once again brought this to a head. Students should be aware of the new opportunities due to technology and use the resulting new concepts of teaching and learning competently at school with awareness of the problem. Furthermore, the goal in this respect is to create optional elements as part of teacher education programmes enabling students to acquire digital

competences and learn to critically reflect on the significance of new technologies for teaching and learning. Other parts of the curriculum are topics such as migration, multilingualism, inclusion and diversity in classrooms and schools facing new challenges. Future teachers need skills and attitudes that include sound knowledge of these topics as well as trauma sensitivity, empathy and sensitivity in dealing with different learning requirements, values, worldviews and social conditions of the pupils. Therefore future teachers are trained more than ever before to act as school developers who are able to and want to actively shape the school. Supported by mentors and experts in subject didactics, students can apply the competences they have acquired as part of the teaching practices and try out new forms of teaching or innovative subject didactic approaches themselves, for instance.

Lifelong learning is of key importance for teachers. Research-led education and training programmes make it possible to link current subject-specific academic and educational topics and findings with subject didactic concepts. The goal here is to intensify cooperation with university colleges of teacher education in the field of continuing education and training of teachers.

Quality assurance plays a major role in joint teacher education. For this, joint processes are developed and established in the alliance. An evaluation concept covering the entire course of study provides indications of strengths, weaknesses and possibilities for improvement of the teacher education implemented in the alliance.

Quality in teaching

Quality assurance and quality development in the areas of studies and teaching are a joint task in which students, teachers and decision-makers cooperate in their different fields. In addition to the regular evaluations of courses, graduation surveys, graduate tracking, as well as specific surveys on individual services aiming to further develop the available degree programmes and the curricula, to improve the available range of courses taught, and individual courses as well as the organisation of teaching are established. Based on the requirement of a quality audit, the University of Vienna developed a package of measures in 2017 which relates to the quality assurance process of the examination process and is intended to have lasting impact. The re-audit of the quality assurance system is to be completed by the first half of 2022 and will also focus on recent developments in the examination process.

With the measures conducted as part of the quality audit (feedback policy, student surveys and dataset on the examination process,

continual monitoring) as well as accompanying examination-didactical support offers of the Center for Teaching and Learning, the University of Vienna aims to achieve lasting improvement of the quality of performance assessments and feedback on the performances achieved for the students. This also applies to online exams, which were widely practised for the first time in the summer semester of 2020. The University wants to ensure quality and fairness here in the same way. It is in the quality interest of the University of Vienna and of the students themselves that the students and graduates actually achieved the competences foreseen in the respective programme.

Performance assessments aim to inform students about the state of the performance they have achieved and they aim to inform employers and other universities about the performance level the graduates have reached. In order to enhance the information value of the grades awarded in the respective degree programme, the teachers are called upon to increasingly discuss subject-specific quality requirements and grade the students' performances based on certain criteria and in a differentiated manner. Fair assessments have transparent objectives and assessment criteria as a starting point and make it easier for students to gear their activities towards meeting these requirements and improving their own learning processes. A significant contribution in this respect is made by giving feedback which goes beyond grading, that is elaborated by teachers themselves depending on the framework conditions and forms part of instructions for peer feedback. With the management information system for teaching since 2019, the persons responsible have been given an instrument to systematically monitor the examination process in the respective degree programme as well as the fairness of the grading, feedback and level of difficulty from the perspective of the graduates and to take measures if necessary.

The development of good curricula is a very important task of a university. Curricula form the decisive framework for studying and teaching and the common point of reference for students and teachers. The degree programmes at the University of Vienna are regularly examined, also with the goal of finding out if the specified learning outcomes are or can be achieved with appropriate learning input and effort. Curricula must take into account both the developments in research (see chapter 3.1.1: Research) and the need to promote early stage researchers and the requirements of the non-university labour market (current data from graduate tracking and other sources are specifically used for this purpose). The qualification profiles and learning outcomes must be transparent to prospective students, students and teachers.

The curriculum development process was set up in consultation between the Senate, the Curriculum Committee and the Rectorate and has proved successful. Before curricula are completely formulated, their objectives and content focus, personnel-related and budgetary frameworks to guarantee appropriate student-teacher ratios as well as required capacities and key points of study feasibility are specified together. This is already done at an early stage and leads to joint written specifications by the Curriculum Committee and Rectorate ('assignment') to ensure that a higher degree of planning certainty is created for all parties involved in the curriculum development process. The same applies to changes of curricula. The work in the curricular working groups is oriented towards these written specifications, which also refers to the fact that a curriculum must be geared towards the qualification profile to be achieved by the graduates. In the course of the approval process in the Senate, the fulfilment of the assignment is checked by the Curriculum Committee.

The programmes are further developed on the basis of the outcomes of the quality assurance processes, and particular attention is also paid here to ensuring study feasibility. In the future, another focus will be on ensuring there is a better overview of all curricula to improve the coordination between the individual degree programmes.

Quality in teaching represents a key value for the members of the University of Vienna. A wide range of higher education-related didactic offers is drawn up for teachers so they can further professionalise their teaching competence. As well as a compulsory 2-day compact course offer for young teachers (predocs) which supports them in their entry into teaching activities, for experienced teachers there are in-depth courses related to teaching competence as well as teaching advice from colleagues and individual coaching. Furthermore, experienced teachers can take advantage of an intensive programme with the Teaching Competence Plus certificate course (15 ECTS credits). The focus is on reflection on and further development of one's own teaching projects as well as peer learning. The aim is to professionalise teaching competence in view of the increasing quality requirements in teaching. Based on the experiences with working from home and remote studying in 2020, in future the qualification opportunities will increasingly be available in the blended learning format or as webinars. In this way, teachers can also participate at any time and from anywhere and, at the same time, build up their digital competences. The qualification opportunities for teachers also make targeted use of the stimuli from the projects funded after a call for tenders for digital and social transformation projects, which were launched in

2020 (including Open Education Austria, Digital Education, iMooX).

Continuing education and training

The Postgraduate Center of the University of Vienna offers more than 70 continuing education and training programmes (master's programmes, university continuing education and training programmes, certificate courses) in many different areas. The postgraduate programmes make it possible for the students to acquire interdisciplinary, occupation-related and specified additional qualifications. The majority of curricula are designed as part-time programmes and are subject to quality assurance criteria which meet international standards for universities.

In the field of continuing education and training, the University of Vienna builds on its strengths in the design of the different continuing education and training programmes. The focus of future offers is on improving the further development of research-based programmes with relevance for the labour market, the enhancement of interdisciplinarity in the available courses, and flexibilisation of teaching methods in practice. In this process, offers are developed with a view to the market and a strong connection to professional practice in their application. Here the entire gamut of continuing education and training programmes reflects the wide range of subjects of the different key research areas of the University of Vienna. Jointly with leading academics, programmes are conceived for specific occupational areas and offered on the continuing education and training market. In addition to the further development of programmes, the focus is also increasingly on the creation of suitable infrastructure.

With its continuing education and training programmes, the University of Vienna supports a lifelong learning and qualification process in a focused way. Here it is the core objective of the continuing education and training programmes to address employed graduates who, besides their professional activities, want to attend a continuing education and training programme in order to further develop their qualifications and, in this way, open up additional career options on the labour market. Moreover, these programmes are also geared towards graduates of bachelor's programmes from Austria and abroad who are interested in one of the numerous continuing education and training programmes to enhance their career prospects. Specific continuing education and training programmes also address people in the post-professional stage of life as a target group.

Alumni/alumnae activities

The activities of the Alumni Association of the University of Vienna aim to maintain lively contact with all graduates of the University of Vienna. The Alumni Association is the official alumni/alumnae society of the University of Vienna. The objectives of the activities of the Alumni Association are:

- **Contact and information:**
Establishing contact is one of the essential foundations of alumni/alumnae activities. The Alumni Association has already been able to establish 80,000 available up-to-date contact details for the University of Vienna. A new, additional focus will be placed on graduation in order to specifically address graduates. Information media such as the univie magazine (circulation 40,000, financed by advertisements) and ALUMNI-NEWS (the newsletter for all registered graduates) are sent out regularly to report on events, continuing education and training opportunities and interesting graduates.
- **Knowledge and networking:**
In events such as the Alumni Lounge, expert knowledge from research and graduates is brought to the podium on current topics,
- **Sense of belonging and giving back:**
The Alumni Association invites people to join to show their closeness to the University of Vienna and has special offers for members. A special kind of belonging develops with the involvement of the graduates. The digital mentoring project of the Alumni Association builds on this. On the one hand, alma:Mentoring for the path to employment, and on the other, u:start: Mentoring for the path to self-employment and business start-up. Alumni/alumnae become ambassadors who actively bring the University of Vienna into discussions. An own digital mentoring platform has been developed, which other universities in Austria have also indicated an interest in using. The next phase will be to develop plans on how to meet this demand.

from artificial intelligence to leadership issues. This is made possible by sponsors from the business world. Furthermore, the Alumni Association supports the creation of subject-related alumni/alumnae groups at the faculties, which offer subject-related alumni/alumnae newsletters and subject-related events. The networking opportunities are very important for the participants.



Administration and organisation of studies and teaching

In the academic year 2019/2020, more than 25,700 applicants began a degree programme, and around 10,100 students completed their studies in the academic year 2018/2019. On account of the size and diversity of the University, with normal university operations the core task of teaching requires an administration which, on the one hand, safeguards the legitimacy and efficiency of the administrative activities and, on the other, also provides innovative services and solutions which support studying and teaching. In the administration of studies, teaching and examinations, hundreds of employees from the service units, faculties and centres make an – often also invisible – contribution to the success of study and teaching each day.

Due to the COVID-19 pandemic, all employees at the University were required to ensure the quality of teaching, examinations and administrative processes within a very short time using digital means while working from home. Legal and organisational uncertainties in the administration had to be overcome as quickly as possible, and stable communication tools between students, teachers and administrative staff had to be established. Media disruptions in processes and services inevitably occurred and had to be eliminated quickly. Through creativity, forward-thinking management and good collaboration between the service units and faculties, the systems and services that are under considerable load have been well provided and stabilised on a lasting basis. Based on these experiences, considerations for the future are also being made in the administration of teaching and studies in order to reflect on what has developed during this time and to rely on innovations made in this period.

u:find, Moodle and u:space are three of the central IT systems which are integrated into everyday student and teaching life and make it possible for students and teachers to focus on the contents of the degree programmes and learning. These tools should also be further expanded in the future. Further simplifications in the administration of studies and teaching need to be connected to these tools, both at the level of technology and in the area of information and communication.

The digital transformation of the administration of studies, teaching and examinations needs to be promoted with the introduction of appointment tools and video identification procedures for people and documents as part of admission and the expansion of the official signature including digital delivery of official notices in order to further reduce the time required for personal appearances.

By gradually introducing digital student files, the aim is also to push ahead with the archiving of digital processes in the StudiesServiceCenters (SSCs). Another central issue is the completion of the work on the new registration system. In future, the allocation of limited places in courses with continuous assessment will be determined by the student's individual position on a structured path of study. This increases the comprehensibility of allocation decisions and the ability to plan studies.

It is also still necessary to respond to networks between the degree programmes and educational institutions. To this end, work is continuing on the Austria-wide digitalisation project Austrian Higher Education Systems Network – AHESN Next together with other educational institutions in order to extend the exchange of data in jointly established degree programmes. One of the further improvements to be achieved by networking the systems is the modernisation of applications for recognition of examinations passed at other educational institutions. In addition, investments must also be made in the data network of the educational institutions in order to be able to synchronise data on a daily basis and report to the ministry.

In the administration of studies, teaching and examinations, hundreds of employees from the service units, faculties and centres make an – often also invisible – contribution to the success of study and teaching each day. With team spirit, solution orientation and the ability to innovate, work should continue on the administrative support of studying and teaching. This also requires, for example, an ongoing improvement of the procedure in software development, sustainable integration of the digitalisation projects that have been started and further professionalisation measures in the service units and SSCs that are appropriate for the target groups (see chapter 3.5: Employees).

3.3 International and National Cooperation Projects

Part of the essence of a university is openness to the world. This also applies to the University of Vienna, of course. In this regard, the University of Vienna sees internationalisation as a core element of openness.

The internationalisation of research and teaching and international cooperation are important because they enable the exchange of ideas with the whole world. Academic knowledge is international because all academic discourse is international. The internationalisation of research and teaching is therefore always part of a comprehensive quality strategy. Teaching and research cooperation projects with the most suitable partners for this purpose help keep up with the leaders in the academic world internationally. This gives rise to the University of Vienna's claim to be an internationally competitive university that

- attracts talented students and (early stage) researchers;
- offers degree programmes of recognised quality whose graduates are readily employed by other organisations;
- offers attractive framework conditions for teaching and research so that academics enjoy working at the University of Vienna.

Moreover, in the understanding of the University of Vienna, internationalisation is part of the educational mission in the 21st century. As citizens and workers in a globalised world, our graduates need intercultural competences, international experience and contacts, and good language skills, which are acquired especially during stays abroad.

Cooperation projects are also relevant in the national and especially regional context because they contribute to enhanced use of infrastructures and exploitation of synergies in research and teaching. Cooperation with international partners should always be on an equal footing and meet high academic standards, and should take into account the interests of the University of Vienna and of the location of academic study.

3.3.1 Mobility Programmes and Internationalisation@home

Mobility is important because it opens up new perspectives on students' and teachers' own academic discipline, on their own country, on the host country and on themselves.

The University of Vienna accounts for one quarter of all Austrian ERASMUS mobility stays of students. More than one fifth of the graduates of the University of Vienna have completed a stay abroad as part of their degree programmes. In the area of student mobility, the University has concluded around 1,340 ERASMUS agreements and around 90 cooperation agreements with universities outside the EU. In the area of teacher mobility, the University of Vienna has agreed on possibilities of mutual teacher exchanges with more than 380 EU partner universities and has concluded framework agreements with over 70 partner universities outside the EU.

The University maintains intensive research contacts with top-ranking international universities (see chapter 2.1: Research at the University of Vienna) and with many other international universities and research establishments.

Student and teacher mobility

Periods spent abroad by students but also the appointment of professors from other countries constitute major instruments for expanding and augmenting the research perspectives and teaching contents. ERASMUS represents a vital tool in the field of student and teacher mobility and makes it easier to spend periods at one of the numerous partner universities both inside and outside the EU. In addition, the University of Vienna has its own complementary programmes to promote student and teacher mobility also in countries outside Europe.

The existing system is well established, improvements and new aspects should have a clear focus on quality assurance and digitalisation of processes in the coming years (see also chapter 3.6: Digitalisation).

ERASMUS+ student mobility:

The University of Vienna has implemented important quality assurance measures for the linguistic and intercultural preparation of outgoing students and has developed specific information formats to promote mobility and to increase the quality of mobility stays. These measures need to be further refined. The University has established itself as a popular destination in the incoming area. Measures for quality assurance, such as enhancing services for the social integration of incoming students or expanding courses held in English, should be implemented here in order to remain attractive as a partner university.

The University of Vienna will endeavour to maintain or even increase the already achieved level of mobility stays (incoming and outgoing). Important prerequisites here are

- a targeted information policy and skilful marketing of the mobility programmes, and
- integration of mobility options in the curriculum, e.g. within the framework of the recommended path of study, as well as through flexible recognition options for credits obtained at partner universities (e.g. for alternative extensions, compulsory elective subjects, etc.)

In addition, the portfolio of partnership agreements should be further developed in a quality-oriented manner in order to enable students and teachers to spend time at a high-quality university.

Certification of summer/winter schools:

The University of Vienna offers a wide range of short programmes in different academic disciplines during the period when there are no classes. For reasons of quality assurance and to ensure better visibility of this offer, a certification process was introduced in 2014, which has proven successful. Certified summer/winter schools offer international and Austrian students and early stage researchers the possibility to establish contacts and exchanges with experts from research and practice as well as students from the whole world.

Internationalisation@home:

A significant contribution to Internationalisation@home is made by the international academic staff, the international students (who complete an entire degree programme at the University of Vienna) and the incoming students and teachers. They all bring an international perspective to the University of Vienna. Moreover, courses held in English are important at bachelor's, master's and doctoral level. Around a quarter of the master's programmes are offered in English. In future, the doctoral programmes will be offered primarily in English in order to attract talented international doctoral candidates. This pull effect should be further strengthened by internationally visible and attractive doctoral schools whose target audience is the most talented early stage researchers from all over the world.

3.3.2 International Cooperation Projects Based on Contracts

Cooperation projects exist in the national and regional but also in the international context, aiming to use infrastructures in a better way, improve quality in research and teaching and optimise administrative processes by adopting best practices. Moreover, dealing with the major societal challenges of our time (particularly missions in Horizon Europe and the UN Sustainable Development Goals), an area where the University of Vienna wants to make a contribution (cf. chapter 3.4: Impact of the University on Society – Exchange of Knowledge), also requires cooperation at the national and, in particular, international level. Initiatives for cooperation projects usually come from researchers and are pooled together and ensured by institutional measures. The following should be pointed out:

Consolidating and strengthening strategic partnerships:

By concentrating on a few renowned partners, a new quality of international cooperation is achieved. This means that university-wide cooperation projects with leading research universities also outside the EU are being intensified and, at the same time, the used funds are being concentrated. The aim of strategic partnerships is to achieve particularly intensive cooperation in the areas of research and teaching at the level of academics and management, as well as in student and teacher exchanges. The University of Vienna currently has five strategic partnerships with the Hebrew University of Jerusalem (since 2015), the University of Chicago (since 2016), Peking University, Fudan University and Kyoto University (all since 2019). The focus in the coming years will be on consolidating the existing strategic partnerships. At the same time, the University of Vienna plans to enter into further strategic partnerships.

Partnership Berlin-Vienna-Zurich:

Thanks to the exchange with Humboldt University of Berlin and the University of Zurich as part of this network, new insights and findings are discovered about the organisation of universities that are run in a modern way. This cooperation now goes beyond the Rectorate level and also covers the area of central services.

Use of existing research cooperation projects:

The University of Vienna will expand its international research cooperation projects in the coming years and use existing cooperation projects intensively. Worth mentioning here are, in particular, the European Southern Observatory (ESO), the Centre Européen de Calcul Atomique et Moléculaire (CECAM) and participation in ESFRI/ERIC research infrastructures (see also chapter 3.7: Infrastructure).



Membership in European university networks:

The University of Vienna is a member of numerous organisations and networks that aim to further develop the European Higher Education and Research Area. The most important membership for the University of Vienna is its membership in the network of European research universities The Guild of Research-Intensive Universities, established in 2016, because it allows for an exchange among similar universities on an institutional, academic and technical level. In addition, the University of Vienna is involved in the European University Association (EUA), the umbrella organisation of European universities and national rectors' conferences, in which more than 800 universities from 48 European countries are represented. The University of Vienna is also represented in the Network of Universities from the Capitals of Europe (UNICA) and the European University Foundation (EUF).

CENTRAL network:

CENTRAL is a network of five universities in Central Europe. It consists of the Humboldt University of Berlin, Charles University (Prague), the University of Warsaw, Eötvös Loránd University (Budapest) and the University of Vienna. Founded in 2014, it is funded by the DAAD (German Academic Exchange Service) until the end of 2020. The University of Vienna plans to increase its involvement in the CENTRAL network in the coming years in order to gain increased visibility and enhance its profile in this emerging academic area against the background of geographical proximity, shared history and cultural affinity. This gives the University of Vienna the opportunity to increasingly contribute its academic competence on the topic of Central Europe to the network and to further expand it there with the partners. The University of Vienna wants to take over the coordination of the network in the next four years. The promotion of early stage researchers remains a goal. The network would also like to launch new activities (e.g. joint summer schools) and ensure CENTRAL becomes more established in the consciousness of the interested public (e.g. through joint online lectures series).

3.3.3 National Cooperation

The academic world is characterised by competition and cooperation. Universities compete with each other for funding, academics, staff and the best students. Cooperation is essential to exploit complementary aspects in academic profiles, to use infrastructure efficiently and to create critical mass in international competition by forming national clusters. For structural reasons there are excellent prerequisites for greater cooperation – in the environment of the University of Vienna there are several universities, universities of applied sciences, university colleges of teacher education and also prestigious non-university research institutions.

In order to become even more competitive internationally, to promote the attractiveness and visibility of Vienna as a research location and to be prepared for a possible national initiative of excellence, the University of Vienna is maintaining and expanding its cooperation projects with strongly research-oriented universities in the Vienna area. A possible model could be the Berlin University Alliance²⁵.

In addition, the following specific activities need to be intensified and, if necessary, also secured on a contractual basis to strengthen the mutual obligations as part of the cooperation

Cooperation with the Medical University of Vienna

The University of Vienna wants to further strengthen and intensify the already well-developed cooperation with the Medical University of Vienna. This is also done by establishing joint structures in order to use synergies and be internationally competitive. The tried-and-tested cooperation as part of the jointly run Max Perutz Labs is being continued. These will continue to carry out internationally visible basic research in the field of molecular biology and, in this regard, will also enhance the connection to clinically relevant subjects. The joint use of state-of-the-art equipment infrastructure plays a special role here. This joint use is part of the Vienna Life Science Instruments (VLSI) initiative and at the Bohrgasse location as part of the involvement in VBCF GmbH and in the Cloud Infrastructure Platform (CLIP). The establishment of a joint doctoral school of the two universities in cooperation with the institutes Institute of Molecular Biotechnology (IMBA), Research Institute of Molecular Pathology (IMP) and Gregor Mendel Institute (GMI) will strengthen the cooperation at the Vienna Biocenter (VBC) location. Teachers are also active together here in master's programmes. In addition, the construction of the new 'University

of Vienna Biology Building' in the Bohrgasse/Schlachthausgasse area will create one of the most attractive research locations in the field of life sciences (see chapter 3.7: Infrastructure).

Other institutionalised cooperation schemes with the Medical University of Vienna include joint professorships, joint research projects (inter-university cluster projects) and joint curricula (see chapter 3.2: Studying and Teaching) and, in particular, the jointly planned doctoral programme in the field of molecular biology, which should also be the basis of the above-mentioned doctoral school at the VBC site (see chapter 3.1.2: Career Development of Early Stage Researchers). Joint professorships, for instance at the interfaces between mathematics, computer science and medicine (computational medicine) and at the interface between medicine and nutritional sciences (public health nutrition), are already well advanced (see chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships). The inter-university cluster projects, which promote innovative, translational projects, are essential in forming another scientific bridge to the Medical University of Vienna.

The plan is also for the university scientific advisory boards (SABs) of the University of Vienna and the Medical University of Vienna to cooperate, including as part of joint meetings, in order to coordinate further on important strategic decisions and be able to react jointly to new trends in research.

Based on existing cooperation projects, the following thematically oriented cooperation projects with the Medical University of Vienna will also be continued and expanded in the future:

- In the postgenomic era, the understanding of the combined effect of different classes of molecules, for which experimental investigation is possible via proteomics, lipidomics and metabolomics, constitutes a major basis for the further development of diagnostic and therapeutic possibilities. Patient-related data can be systematically collected through the joint infrastructure set up for this purpose by the two universities, the Joint Metabolome Facility, which has been in existence since 2019. In this way, empirically collected clinical observation data can be combined with individualised data containing information about thousands of biomolecules so that specific manifestations of disease processes and therapy effects can also be understood mechanistically. The research area could also be the subject of a joint doctoral programme.

²⁵ <https://www.berlin-university-alliance.de/>

- Cooperation in the fields of cognitive science and neuroscience, which has been set up in recent years, has been further developed to establish a joint virtual cluster in the field of cognitive neuroscience, including together with the University of Veterinary Medicine, Vienna. Based on this joint cluster, in this internationally highly competitive field the establishment of competitive research-based and research-led doctoral and master's programmes together with the Medical University and the University of Veterinary Medicine should strengthen the location on a lasting basis (see chapter 3.2: Studying and Teaching).
- An important field of cooperation with the Medical University of Vienna is microbiome research (see chapter 3.1.1: Research). The research location Vienna has excellent preconditions for holding an internationally leading position in this field, not least due to the Centre for Microbiology and Environmental Systems Science established at the University of Vienna (see chapter 4.Z4: Centre for Microbiology and Environmental Systems Science). To successfully work on the topic, close cooperation between the University of Vienna, the Medical University of Vienna, the Research Center for Molecular Medicine of the Austrian Academy of Sciences (CeMM) and the University of Veterinary Medicine, Vienna is a good solution. An initial starting point for further intensified cooperation in the field of microbiome research is the Joint Microbiome Facility, which was established in 2019 between the University of Vienna and the Medical University of Vienna.
- It is planned to deepen cooperation in the field of pharmacy, especially in the area of pharmacology, with the Medical University of Vienna. Based on the research-led master's programme in Drug Discovery and Development of the University of Vienna, it would be possible to establish a joint master's programme of the two universities in the medium term. In the field of life sciences it is planned to set up joint doctoral programmes. These could lead to enhanced permeability and recognition of curriculum modules as well as joint degrees (see chapters 3.2: Studying and Teaching, and 3.1.2: Career Development of Early Stage Researchers).
- The already long-established cooperation in the area of cancer research and cancer therapy (e.g. Ludwig Boltzmann Institute Applied Diagnostics) has led to the development of clinically relevant new therapeutics and many developments in the advanced preclinical field. The multi-dimensional analysis of the effects of active agents in model systems and in patients is an innovation related to these

activities. Here both universities focus on translational research, the development of active agents and toxicology.

- Continuation of the research platform 'Department for Ethics and Law in Medicine'.

Cooperation with TU Wien

There exist many successful and longstanding cooperation projects with TU Wien and there is regular consultation with this institution especially in the fields of physics, chemistry, mathematics and computer science. The following special activities that go beyond this usual framework of cooperation need to be mentioned:

- The Erwin Schrödinger Center for Quantum Science & Technology (ESQ) strengthens quantum physics in Austria as a research location. The ESQ is a joint initiative with TU Wien, the University of Innsbruck and the Austrian Academy of Sciences (ÖAW). The Vienna Center for Quantum Science and Technology (VSQ) is going to be continued together with TU Wien and the ÖAW.
- New subjects for increased cooperation present themselves, based on FWF-funded joint projects, in mathematics (in particular in the fields of partial differential equations and discrete mathematics) and also in computer science. The Vienna School of Mathematics, which is run jointly with TU Wien, bundles the doctoral education of both universities in mathematics. The field of high-performance computing (Vienna Scientific Cluster, VSC) and the HPC Competence Center Austria continue to have special relevance as a starting point for cooperation projects (see chapter 3.7: Infrastructure). Another perspective in the cooperation with TU Wien would be one between social sciences and technical sciences.
- Continued joint participation with TU Wien and the Vienna Business Agency in the business incubator INiTS, with the goal of promoting spin-offs and start-ups (see chapter 3.4: Impact of the University on Society – Exchange of Knowledge).

Cooperation schemes with the Austrian Academy of Sciences (ÖAW)

Cooperation schemes with the ÖAW arise automatically, so to speak. This is because many professors of the University of Vienna are also corresponding or real members of the ÖAW and can therefore co-shape the development of the ÖAW with their vote. Moreover, many professors and associate professors of the University of Vienna are also active as heads of research institutes or research groups at the ÖAW.

The following special cooperation projects which go beyond the usual extent need to be mentioned:

- Cooperation in the field of quantum physics has been strengthened and institutionalised by setting up the Erwin Schrödinger Center for Quantum Science and Technology jointly with the ÖAW, TU Wien and the University of Innsbruck. The close personnel and infrastructure ties between the Faculty of Physics and the Institute for Quantum Optics and Quantum Information (IQOQI Vienna) open up new perspectives.
- In the field of digital humanities, cooperation with the ÖAW and the University of Graz will be continued as part of the Austrian Center for Digital Humanities (ACDH).
- Cooperation projects in the field of archaeology, including with the Austrian Archaeological Institute, as well as in the area of languages and cultures of the Middle East and Asia were intensified. A joint memorandum of understanding between the University of Vienna and the ÖAW lists as cornerstones the joint application for third party-funded projects, e.g. an FWF special research programme, cooperation in the area of teaching (e.g. within the framework of a possible joint

doctoral programme), the cooperative use of infrastructure and the joint recruitment of outstanding researchers.

- Ultimately it is planned to establish cooperation projects with the research associations of the ÖAW (IMBA, CeMM, GMI) and with the Research Institute of Molecular Pathology (IMP) in the field of a joint doctoral school at the location, building on a joint doctoral curriculum of the University of Vienna and the Medical University of Vienna, the career development of scientists who are particularly successful or will be recruited jointly, and infrastructure planning.

Cooperation schemes with university colleges of teacher education

In the North-East Schools' Group, a cooperation project has been ongoing since 2016 with the University College of Teacher Education of Christian Churches Vienna/Krems, the University College of Teacher Education in Lower Austria, the University College of Teacher Education in Vienna and the University College for Agrarian and Environmental Pedagogy. It focuses on the jointly established teacher education programme at secondary level (general education) (see chapter 3.2: Studying and Teaching). All the students of the bachelor's and master's



programmes in teacher education are students at all of these institutions. The central themes of this cooperation are both consultation regarding teaching and quality assurance of the joint programme and also the (further) development of this cooperation in continuing education and training of teachers.

Cooperation schemes with the University of Veterinary Medicine, Vienna, the University of Natural Resources and Life Sciences, Vienna, the Ludwig Boltzmann Gesellschaft, universities of applied sciences and other institutions

A large number of cooperation schemes have been set up with other national research establishments, with the following being continued and, where appropriate, expanded.

- WasserCluster Lunz: The WasserCluster Lunz is a joint company of the University of Natural Resources and Life Sciences, Vienna, Danube University Krems and the province of Lower Austria. The city of Vienna makes major contributions to safeguarding the efficiency of this institute, which specialises in limnology.
- Together with many Austrian universities and non-university research establishments, the University of Vienna is a member of the Climate Change Center Austria (CCCA) and takes part in the Austrian Polar Research Institute (APRI) jointly with the University of Innsbruck, the University of Graz and the Austrian meteorological and geophysical service (ZAMG).
- The University currently runs the Messerli Centre for Human-Animal Interaction jointly with the University of Veterinary Medicine, Vienna and with financial support from the Messerli Foundation. The University cooperates with the Ludwig Boltzmann Gesellschaft in the field of human rights and as a partner in the Institute for Applied Diagnostics.
- The University cooperates with the University of Natural Resources and Life Sciences, Vienna, and other Austrian universities in projects also in the area of citizen science.
- AUSSDA (the Austrian Social Science Data Archive) makes available a newly created data infrastructure for the social science community in Austria. AUSSDA is represented with its own working groups in the Universities of Graz and Linz and connected through an advisory board with all other Austrian universities and with the funding institutions and non-university research establishments. In addition, AUSSDA is the Austrian representative in CESSDA ERIC (Consortium of European Social Science Data Archives).
- Cooperation with universities of applied sciences at the location of Vienna will be continued, with attention paid to permeability towards master's or doctoral programmes at the University, provided that this makes sense in terms of subject matter, and the goal of further developing permeability. Transitions need to be defined based on exemplary master's programmes and the exams to be taken at a later point in time need to be specified independent of individual cases.
- Work is under way with the FH Campus Wien to develop a joint master's curriculum at the interface of translation studies and new digital technologies.
- The University of Vienna would welcome intensified cooperation with the Institute of Science and Technology Austria (IST Austria) in suited research fields (such as in the area of neuroscience).
- Joint inter-university research network Elfriede Jelinek with the Music and Arts University of the City of Vienna.
- With the International Institute for Applied Systems Analysis (IIASA) and the ÖAW, the Wittgenstein Centre will continue in the field of demography.
- Further cooperation with the Institute for Advanced Studies (IHS). The cooperation should also enable joint professorships/tenure track positions to be filled in the fields of business, economics and social sciences in coordination with the faculties concerned, while maintaining the content-related and qualitative requirements of both institutions.

3.4 Impact of the University on Society – Exchange of Knowledge

The University of Vienna is aware of its important role in the innovation cycle and wants to actively shape it. In the innovation cycle, research and teaching of the University are sources of innovation and individual competences that contribute to finding sustainable solutions to the related challenges. Similarly, the University receives stimuli from business and society that inspire our research and teaching.

One particular strength of the University of Vienna lies in the diversity of the academic disciplines represented at it and its internationally oriented, high-quality and excellently networked research. The contributions of the University extend the limits of human knowledge and are highly relevant to understanding and effectively co-designing ecological, technological, cultural, economic, social and digital transformations and their impacts. Answers and solutions to the associated questions and problems are based on findings from basic research, which are further developed in application-oriented research. On this foundation, the University of Vienna aims to provide its students, the academic community, policy makers, the business sphere, culture and society at large with analyses of the profound changes associated with the transformations and their interactions. Based on a strong international network, academia can provide stimuli for solution concepts from a local to a global level.

The societal challenges can only be addressed through an exchange between the universities and the actors and interest groups in business, politics, culture and society and by networked research activities. To this end, the University of Vienna draws on a wealth of experience, knowledge and methods. In interaction with external stakeholders, academia is involved in shaping the transformations in two roles at least: It actively contributes to the changes through new findings and innovations and at the same time assumes a vigilant, critically reflective role.

The term ‘knowledge exchange’ encompasses all measures and activities aimed at networking the University with the various social sub-groups on a variety of levels, actively reaching into these sub-groups, cooperating with them and helping shape social, cultural and economic developments on the basis of academic findings. At the same time, this term stands for mutual exchange and the inclusion of questions and problems from practice in university-based research and teaching.

In the North-East Schools’ Group, the University of Vienna together with the participating university colleges of teacher education (see chapter 3.2.3: Challenges/Cross-Sectional Topics) trains thousands of teachers for all school years at secondary level and almost all subjects taught there. In their future profession, they make an invaluable contribution to the exchange of knowledge in Austrian society. Through their well-founded expertise, future teachers contribute to making academic knowledge accessible to a broad public by means of comprehensive subject didactics and ensuring it becomes an established part of society.

The University of Vienna’s commitment in the area of knowledge exchange is able to initiate innovations and make academically based contributions to guidance on questions of social relevance. The spectrum of activities ranges from the commitment of students and academics in solving local and regional problems on to participation in global social development through ground-breaking academic findings. The goal is to interact with the various sectors of society through cooperation with business, cultural, governmental and non-governmental organisations (NGOs), as well as through participation in open innovation and citizen science initiatives. Furthermore, the University sees its task in providing the public – from children and young people to adults of all ages – with insights into current research as well as into academic working methods.

3.4.1 Objectives

The University of Vienna wants to further systematise and intensify its activities aiming at enhancing knowledge exchange and wants to make them more visible. In this process, the University wants to play an active role in all stages of the innovation cycle – from the idea on to the exploitation of project results – and wants to strengthen exchanges with societal stakeholders. The University of Vienna sets itself the following objectives in this field for the current development planning period:

Contributing to solving societal challenges

With its expertise, the University of Vienna wants to contribute to solving the major societal challenges of our time. These are defined, for example, in the EU Framework Programmes (especially ‘societal challenges’ or in the future ‘missions’²⁶) or the UN Sustainable Development Goals (SDGs)²⁷. Universities will play a significant

²⁶ https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/missions-horizon-europe_en
²⁷ <https://sustainabledevelopment.un.org>

role in implementing the tasks associated with the Development Goals and missions. Each SDG is highly complex and has to be addressed from different academic perspectives and by applying networked research approaches. As a research institution and educational establishment, the University of Vienna contributes to creating relevant academic foundations and, through its teaching and educational programmes, empowers people to find solutions to the major challenges facing society. The SDGs are also suitable for illustrating how the University of Vienna, with the academic disciplines represented at it, can make a significant contribution to solving complex global problems. For this it is necessary to integrate results from university research even more strongly into society, culture and the economy and (further) develop them in joint projects (see also chapter 3.1.1: Research).

Also in degree programmes, the University wants to strengthen the connection to society and increase the practical relevance of the study contents such as by providing a deliberate link between academic knowledge and practical involvement (service learning). In university teaching it is the goal, wherever this is useful in terms of topics and appropriate in terms of methods, to connect academic learning with societal commitment (see chapter 3.2.1: Studying at the University of Vienna).

Research and knowledge exchange: promoting an open climate

The University of Vienna wants to be perceived as an open, reliable partner also in the area of knowledge exchange. Stimuli and suggestions for academic questions from the economy and society will be considered appropriately in order to create an innovation cycle. The prerequisite for functioning knowledge exchange is a network of trusting partnerships with stakeholders outside the University. The network of the University comprises representatives of the economy and industry as well as of social and cultural organisations and of the public sector. Through cooperation and exchange with partners from the economy, society and the state, the University also makes an important contribution to the innovative strength and competitiveness at the location. A strong network with external partners can also be the starting point for new sources of funding.

The University of Vienna strives in particular to establish long-term, cooperative ventures, for example through joint projects, framework agreements, Christian Doppler Laboratories, the Ludwig Boltzmann Institute or participation in knowledge transfer centres (such as wings4innovation). To promote new partnerships, the University of Vienna also aims to organise the establishment of topic-oriented, interdisciplinary networks of academically active people

from different academic disciplines within and outside the University (such as through research platforms, research networks and networking events).

Another important aspect of the active exchange of knowledge is the opening up of research. To this end, the University of Vienna advocates open research and development activities and projects (open science/open innovation), open research data (open data) and the accessibility of research results (open access, patents) where possible and appropriate, at the European level in particular within the framework of the European Open Science Cloud (EOSC). Opening up research not only makes it easier to link academic activities and share results within academia, but also facilitates faster, broader and deeper participation in university research and teaching (such as through cooperative projects, citizen science and service learning projects) (see chapters 3.1.1: Research; and 3.2: Studying and Teaching). At the same time, open, participatory research approaches are intended to strengthen the mutual exchange on current topics between the University, the economy and society. In order to ensure this in a structured way, discipline-specific advisory services for researchers on the handling of research data and analysis methods are to be developed at the University of Vienna. Access to internal and external research infrastructures (e.g. repositories, high-performance computing), which is required for opening up research, is to be made available for its academics.

Open access to academic knowledge and its communication help to create points of orientation in political and social debates. At the same time, the goal is to enhance understanding of academic methods and approaches in order to improve the acceptance and appreciation of university-based research. Research projects conducted at the University of Vienna will also include measures for communication and, where appropriate, also for knowledge exchange. Project leaders will be actively supported in this.

In addition, event and communication formats are being developed and continued, such as those that create space for taking up and exchanging stimuli from the innovation cycle. Targeted public relations activities will continue to contribute to the visibility of academic findings and perspectives in current debates.

Strengthening technology development, utilisation and transfer

Thanks to their creative potential, universities are important institutions for advancing new technologies, for example, and thus bringing benefits for society by translating findings from



basic research into innovation. This process, known as technology transfer, starts out with the identification of inventions that can ideally be taken up by the commercial market in the form of products, services and business models.

Successful technology transfer begins with the academics' awareness of the transfer potential of their research results. In a further step, they should be supported in identifying those developments that are relevant for the implementation of solutions to real problems. Selected patents and copyrights are to be preserved and protected, products and processes licensed to existing companies, and academics encouraged to found new companies. The successful transfer of an idea from the University also requires strong partnerships for the further development and exploitation of new applications arising from it. In this context, sustainable partnerships are particularly important which enable the implicit knowledge associated with the technology to also remain available. Funding can help enable such engagement, e.g. from the Austrian Research Promotion Agency, the Christian Doppler Research Association, the Vienna Business Agency, or at the European level from the European Commission (especially the 'missions' in Horizon Europe), the European Research Council (especially Proof of Concept) and the European Innovation Council, for example. The University of Vienna wants to create opportunities to publicise and implement the technologies it has developed in order to position itself even more prominently as a player in the innovation cycle. This will include, by way of an example, success stories or illustrate the range of possible cooperation projects.

In the creation, development and commercialisation of intellectual property (IP), the University of Vienna wants to pay more attention to synergies with external partners and here relies on the support and advice of its academics. The process of exploiting the intellectual property and expertise of its academics will be further simplified, for example through templates and standards of the University while maintaining the necessary flexibility for each individual transfer situation and set of conditions.

Students, graduates and academics of the University can also contribute to the economic development of society by licensing service inventions or with start-ups or spin-offs. Findings from university research are introduced into the non-university innovation process and thus form a major element of a lively knowledge exchange. This requires an open climate and a founder-friendly environment. For its creation, measures are envisaged ranging from information about programmes for students, training programmes for early stage researchers as well as support in the acquisition of external funds or the integration of start-ups into the university environment.

A team of experts on knowledge exchange and technology transfer at the University of Vienna continues to guarantee the provision of advice and support to its academics in all technology transfer activities. This team works closely with researchers to facilitate the transfer of research results to established companies as well as to start-ups. The University of Vienna also continues to cooperate with the business incubator INiTS to support and advise spin-off companies

(see chapter 3.3.3: National Cooperation) and thus makes an important contribution to local and regional innovative strength and competitiveness.

Knowledge exchange in the context of digital transformation

On the one hand, the University of Vienna is engaged in critical and constructive discourse about the opportunities and challenges of digitalisation (see chapter 3.6: Digitalisation). On the other hand, it also sees great potential in the development and distribution of science-based digital innovations. To this end, the University aims to link and communicate interdisciplinary research approaches, methods and results in the field of digitalisation. In this way, research-based knowledge is to be integrated into practice and policy-making and contributes to shaping digitalisation in a reflective and proactive manner.

The digital transformation is also permanently changing the way this exchange with society takes place. Digital technologies are constantly providing new opportunities for knowledge exchange and technology transfer, knowledge accessibility and participation in research, development and exchange activities. It is also important here to open up new digital communication channels in order to enhance understanding of university research. The public will therefore be actively informed about current issues, the creative research process and its results, engage in dialogue with the University and become involved with it.

Knowledge exchange as a core competence for the next generation

Students and early stage researchers address the academic and social issues of tomorrow from a wide range of disciplinary perspectives. After completing their papers and research projects, they contribute to critically analysing diverse developments and to solving new challenges not only in academia, but also in the business sphere, politics and society. One key objective of the University is to raise awareness among this next generation of the importance of research and scholarship in understanding and solving societal challenges. They should acquire relevant competences as early as during their university-based education (see chapter 3.2.1: Studying at the University of Vienna).

A small number of students and not all early stage researchers follow a continuous academic career. It is therefore all the more important to show the next generation of graduates and early stage researchers also career paths for academic activities outside universities (e.g. in business, the public sector or NGOs) and to prepare them

for these tasks. By participating in cooperative research projects having either an application focus or being open to application, students and early stage researchers become familiar with the working methods and requirements of other sectors. Here the foundations for personal networks, which are useful for a later career inside and outside the University, are also laid. The goal is to continue to provide training on transferable skills and develop new formats to enhance opportunities in the non-university labour market.

Already at an early stage of its academics' careers, the University of Vienna aims to provide them with options as to how their academic findings can be further developed, exploited and thus introduced into the innovation cycle. Training in the field of entrepreneurship, for example, and targeted proof of concept funding are intended to be part of an appropriate support portfolio for early stage researchers. For this purpose, it is also important to create a climate of openness and appreciation towards activities in the field of knowledge exchange to make sure that early stage researchers feel encouraged to take advantage of the associated opportunities. Knowledge exchange is meant to open additional doors without closing others.

In order to be seen as an attractive partner in knowledge exchange for business and society, it is also important to have a network of successful graduates and early stage researchers to draw on who paint a positive picture of their alma mater in the public eye and bring the University into play for cooperation projects. This is reinforced even further if they have already experienced the added value of cooperative projects between the University, business and society themselves during their time at the University of Vienna. The basis for a lasting interest in the University of Vienna is laid during their period of study and research and preserved after they leave.

3.4.2 Academic Communication

An active knowledge exchange between the University, business, culture and society, accompanied by academic communication measures, is the best prerequisite for making the role of the University in innovation processes accessible and providing orientation in dealing with key societal challenges. The common goal of the measures to be implemented is to communicate the importance of scholarship and research even better and thus further strengthen both the trust in academic findings and the reputation of the University as an open, reliable partner in the public sphere. All communication measures are contributions to helping the University achieve its strategic goals, from active studying and making excellent and socially relevant re-

search achievements visible on to participatory research approaches and addressing knowledge exchange itself.

Formats of academic communication provide support in the process of initiating dialogue between the members of the University and external partners and shaping it actively. Academic communication aims to arouse interest ('public awareness of science'), explain scholarship and make it understandable ('public understanding of science') and thus contribute to an improved basic understanding of scholarship ('scientific literacy'). The establishment of wider networks between academics as well as social and economic actors can strengthen the understanding of research methods and trust in research results. Understanding and trust form the foundations for making an academically based contribution to guidance in dealing with new challenges and crises for society. In summary, the goal is to increase public engagement with scholarship and intensify cooperation schemes with the University.

These are the prerequisites for social actors to work on problems and realise projects together with the University. The University therefore aims to strengthen the dialogue between the academic world and society and further develop target group-specific information, communication and participation measures in the coming years. Open and participatory approaches, which can be described as open science and citizen science, create new opportunities for an intensive and enriching exchange between researchers and people who are interested and get involved in the academic sphere. These approaches can contribute to strengthening interaction between the academic sphere and society in a new way.

The offers provided by academic communication are geared towards different target groups, such as pupils or young adults who are facing the decision for a degree programme, others have a wide focus on all age groups. The format termed Children's University of Vienna, for example, is well established and well known.

Academic communication is successful if there is authentic, in-depth and transparent dialogue. The formats are intended to provide an overall picture of the range of subjects represented at the University of Vienna. The academics' content-related ideas, initiatives, activities, findings and developments are the basis for communication. Communication is increasingly digitally enriched or conveyed entirely digitally. The University of Vienna therefore also wants to become more involved digitally where discourse of an interested public takes place. But for academic communication to be successful it also needs its own virtual and physical places where

regular and institutionalised contacts between the academic world and the public can be established. Academic communication itself must remain innovative and repeatedly develop new attractive formats and use new communication channels.

3.5 Employees

The University of Vienna depends on the talents, qualifications and commitment of all those involved in the institution, the teachers and researchers, and also the non-academic university staff and students equally. Every individual employee is important and bears joint responsibility in their own distinct sphere of work and additionally also due to their commitment and ideas for the functioning and further development of the institution. Independent of their respective position and function in the organisational structure, this constructive and successful cooperation builds on the mutual appreciation of the staff members of the University of Vienna, with the Code of Conduct forming a clear framework. The University of Vienna has high expectations for its staff and supports them appropriately.

The managers at each level have the special task of formulating expectations for the staff members' work performance in dialogue with them, fairly assessing this performance and giving them appreciative, open and motivating feedback at continual intervals with the objective of personal and institutional further development. Managers at all levels support staff members in their competence development in a responsible and reflective manner. In any case, the joint achievement of goals is a guiding principle for this. The University of Vienna invests in the development of management competence and management culture, thus strengthening the institution and its performance.

3.5.1 The University of Vienna as an Employer

Attracting the best-qualified and motivated academic and non-academic staff is crucial for the University's successful further development, especially against the background of the dynamic of the University, in international competition with other universities and research institutions. In addition to the motivation and qualifications of its employees, their commitment, their ability to cooperate and their identification with the University as their employer constitute decisive factors.

In times of demographic change, digitalisation and ever-increasing mobility of (potential) personnel, it is indispensable that the employer actively marks out its own position. This positioning should be designed so it is credible to the inside and communicated so it is perceived positively by the outside world.

In addition to the classic elements of how working conditions can be shaped, qualities that are

intrinsic to the profile of a university increasingly play a role in how much interest there is in a particular employer. The University of Vienna is a place of lifelong learning, which is reflected in a strategically oriented human resources development that focuses on the advancement and expansion of relevant and future-oriented competences in a target group-specific manner. In its capacity as an employer, the University of Vienna also offers its employees identification potential through its organisational purpose and the way in which it fulfils this purpose by providing social and individual meaning and creating societal added value. It additionally offers tasks and activities with high creative leeway, not only for academics and teaching staff, but also for the non-academic university staff. Working in a highly culturally diverse environment is another attractive characteristic of the University of Vienna as an employer.

The University of Vienna as an employer can also meet the increasing need for a professional activity that is in harmony with the people's personal life organisation. Working for an academic organisation is not always bound to traditional working hours as the activity is not necessarily carried out only on the university premises either. This is taken into account, among other things, through a performance-enhancing approach to the topic of working from home and support in the organisation of everyday working life. This also makes it easier to consider individual life situations. The legal and infrastructural requirements must be taken into account.

The University of Vienna employs more than 9,500 people – or 5,400 if calculated as full-time equivalents. The University of Vienna is therefore one of the biggest employers in the city and makes an essential contribution to the creation of value in the location of Vienna, not least through its employees.

Human Resources Development

At the University of Vienna, as an expert organisation whose goal is the enhancement, dissemination and communication of knowledge, the selection of employees and their permanent further qualification play a decisive role. This concerns subject-specific and equally interdisciplinary competences, which are of decisive importance for providing excellent services in the respective area of responsibility and for further developing the organisation overall.

The services offered by Human Resources Development at the University are oriented towards the strategic goals of the University and the competences to be derived from them which characterise the various target groups among the academic and non-academic university staff. The employees are assisted from the moment

they join the University, on to support in fulfilling their role, to transitions in their career.

In the creation and implementation of HR development programmes and processes, which always take into account the special requirements of individual faculties, centres and service units, special focus is placed on the strategic goals of the University of Vienna:

When addressing, selecting and integrating new employees, approaches and tools are used that are tailored to the relevant target group and correspond to a proactive understanding of recruiting and interacting with applicants. This includes the presence of the University of Vienna as an employer in media forums of relevance for the respective labour market (including social media), an attractive and user-friendly job portal and a professional, applicant-oriented recruitment process that takes into account the Affirmative Action Plan for the Advancement of Women and Gender Equality. Especially in academic recruitment including postdoctoral researchers, the proactive search for candidates which should be as international as possible is becoming increasingly important. A proac-

tive search for candidates is also an important instrument for addressing female academics in a targeted way in subjects with a low share of women and counteracting a possible gender bias in the recruitment process.

With its activities, Human Resources Development supports the advancement and expansion of success-relevant competences for a positive and proactive attitude towards work in an increasingly digitalised academic and professional world. Human resources development at the University of Vienna takes place in an environment that is diverse and, above all, international. The use of digital teaching and learning methods as well as a contribution to pushing forward digitalisation overall are central to the services provided by HR development. These target all employee groups appropriately. Ultimately, the human resources development of a university also operates in an international network and deliberately seeks benchmarks and exchange with the human resources departments of other relevant universities. English-language seminars and learning communication and materials, a focus on intercultural understanding and intercultural exchange, and the expansion of English



language proficiency for everyday work, also among non-academic staff, are typical practical expressions of this approach.

The success of all HR development activities is the result of the teamwork among many actors: university management, managers, other establishments working on related topics (e.g. Career Development, CTL, Gender Equality and Diversity) and employees who bear responsibility for their own development.

The clear presentation of the offer for the individual target groups, low-threshold access that is as independent of time as possible, and continuous sound evaluation are additional building blocks for the long-term success and ongoing optimisation and further development of HR development at the University of Vienna.

Diversity, equal opportunities and gender equality, reconcilability

Students and staff of the University of Vienna form a community of people who are characterised by different life situations, experiences, worldviews and competences. The University of Vienna sees this diversity as an asset and understands diversity as a basic experience of human relations which affects all people active at the University. This understanding of diversity has been integrated into the overall strategic perspective of the University. This makes it possible to actively promote individual diversity dimensions as well as to perceive cross-dimensional connections.

An appreciative treatment of diversity is one of the self-evident tasks of the university members, who treat each other with mutual respect and avoid any behaviour that contradicts this principle. Programmes and workshop series for junior and senior members of the non-academic and academic staff broaden the individual action competences of university members and raise awareness of inclusion and exclusion mechanisms. Through recommendations for action and guidelines, such as the recommendations related to incidents of discrimination in teaching or the guideline on gender-inclusive language use, the University promotes the work on and prevention of discrimination.

One focus of activities on equal opportunities at the University of Vienna is gender equality. This is not merely a statutory obligation but also a key component of the profile of the University's culture. Gender equality is integrated into all university activities and enshrined as a universal guiding principle aiming to achieve equality between women and men as well as a balanced ratio between women and men at all levels. In addition, to the extent possible, the University respects and supports gender diversity, par-

ticularly transgender, intersex and non-binary individuals.

A central decision-making basis for the development of career advancement approaches is the monitoring of gender ratios. Overcoming the leaky pipeline – dwindling female percentages at higher career levels – remains the general objective related to the promotion of women in the academic sphere. To this end, career support programmes for young female academics are regularly carried out and are continuously developed on the basis of evaluations. In addition, measures are being taken to promote the mobility and internationality of female academics or to make it easier for them to return to the world of academia after an interruption due to care responsibilities. Of great importance is the (self-) critical examination of the effects of gender bias by all employees and especially by managers, which must be counteracted actively in all phases of an academic career and in all fields of activity.

As an employer and a place of university-based teaching and research, the University of Vienna attaches great importance to promoting the reconcilability of work, studies and other spheres of life. Especially care-related activities take up different amounts of time and attention in different phases of life and still prove to be an obstacle in the professional career of women in particular. The University supports a fairer distribution of care obligations between the sexes by taking measures aiming at reconcilability. In its work culture and organisation, the University of Vienna takes into account care work-related requirements (e.g. flexitime agreements, meeting culture, temporary reductions of working time to a level below the legally stipulated minimum).

3.5.2 The Staff Profile of the University of Vienna

The performance of a university builds especially on motivated and qualified staff at all levels. Particularly when university professors are appointed and when candidates are selected for tenure track positions, this is an inherent prerequisite for recruitment; elements of quality assurance as well as measures of equal opportunities, advancement of women and non-discrimination are of major importance especially in this respect. The University of Vienna aims to further strengthen the active search for staff, especially in the area of tenure track professorships as well as professorships. For individual decisions in the academic sphere, the University of Vienna uses international peer reviews in research as a key basis for decision-making and also places importance on whether candidates already have a good record in teaching or it examines teaching concepts (see chapter 3.8: Quality Assurance).

The university employees also collaborate in the responsible fulfilment of university autonomy by exercising functions at the University according to the 2002 Universities Act, Organisation Plan and Statutes.

The typical career path of an academic usually has an international orientation. Here the University of Vienna can be a starting, intermediate or end point or – with sufficient experience (usually at least two years) at other, preferably foreign research or tertiary educational establishments in between – it can be starting and end point.

Professors

Due to their outstanding research achievements, professors play a leading role in contributing to the – especially international – visibility of the University of Vienna in research, they contribute to dynamic developments and high performance levels in the academic sphere and generate enthusiasm for their subject, introduce students to research work especially also with their teaching, thus making an essential contribution to the supervision/education of students at all stages of their studies and qualification of early stage researchers. Due to their acquisition of third-party funds in line with the circumstances in the respective subjects, the professors, in particular, also contribute to widening the funding basis of the University of Vienna, especially to create positions for early stage researchers. Most professorships at the University of Vienna are filled on a permanent basis following a competitive appointment procedure with an active search for candidates, or professors are appointed based on section 99a of the Universities Act. The University of Vienna offers professors a work environment which is equipped in line with international standards subject to availability of funds.

With the creation and filling of professorships based on section 99, para. 4 of the Universities Act for associated professors, the University of Vienna pursues the objective of safeguarding the lasting attractiveness of tenure track positions at the University of Vienna, also going beyond section 99, para. 6 of the Universities Act. The University of Vienna considers those professorships based on section 98, section 99, para. 4 and section 99a of the Universities Act as having the same tasks and being equivalent. This should be taken into account, subject to availability of funds, with an appropriate, task-, quality- and performance-oriented provision of resources. The associated professors who are employed at the University of Vienna at the respective point in time are competing with each other for the professorships based on section 99, para. 4 of the Universities Act, which need to be advertised at regular intervals (see chapter 3.5.3:

Human Resources Planning and Procedures), the procedure is laid down in the Statutes.

Tenure track

Compared to appointment procedures at the level of full professors (based on sections 98 or 99a of the Universities Act), the recruitment for tenure track professorships is increasing considerably at the international level. The University of Vienna is focusing to a greater extent on this instrument and making it attractive. One major competitive disadvantage has ceased to apply due to an amendment to the Universities Act: Similar to international examples, the University of Vienna now has the possibility, with the tenure track professorship, to offer a career model which can lead to a full professorship after an appointment based on section 99, para. 4 of the Universities Act following related qualification procedures.

Tenure track professorships are subject to similar qualification requirements as professorships, but entry takes place already at an earlier point in time of the academic career and is also intended, depending on the practices common in the respective academic discipline, to facilitate the early establishment of an own working group. The qualification procedure is structured as follows: Upon taking up a position that has been advertised accordingly, the University of Vienna concludes a qualification agreement with the holder of the position. The theme of the qualification phase is, in particular, the development of the candidate as an autonomous scholar and academic teacher with a high degree of independence. Fulfilment of the qualification agreement, as a rule after four years, leads to a permanent contract as an associated professor. Associated professors fulfil similar tasks as university professors, especially also in the supervision of academic theses independent of whether a habilitation is granted or not.

The University of Vienna offers a simplified fast-track selection process for a tenure track position for scholars with an ERC Starting Grant, ERC Consolidator Grant, the FWF START Prize or a WWTF VRG grant on certain conditions.

Subject to availability of funds, the University of Vienna offers holders of tenure track professorships a work environment which is equipped in line with international standards, the career level and the career development targeted by the tenure track career model and also wants third-party funds to be raised. For the corresponding appointment procedure based on section 99, para. 4 of the Universities Act see above.

Associate Professors

Associate professors have developed from habilitated university assistants and, since their appointment as associate university professors, have represented their academic discipline autonomously. Associate professors are key providers of research and teaching and university (self-) administration at the University of Vienna. With their research achievements, they contribute to the visibility of the University, introduce students at all stages of study to research and make a key contribution to the supervision and training of students, the qualification of early stage researchers and the acquisition of third-party funds. An appropriately equipped environment is needed for the fulfilment of these tasks.

Postdocs

At the University of Vienna, postdoctoral researchers (see also chapter 3.1.2: Career Development of Early Stage Researchers) enhance their own academic profile in research and teaching and introduce it at the University of Vienna, also by supervising students, for a limited period of time. In this way, postdoctoral researchers qualify themselves for an academically oriented non-university activity or for the next academic career level, whether in university-based research and teaching or in the economy or with other non-university employers. Postdoctoral positions are valid for a fixed term of three to six years and can be financed either by third-party funds or the global budget, in each case depending on the requirements of the subject, taking the international context into account. The University of Vienna wants to continue to offer institutional assistance to holders of postdoctoral positions for their development (particularly of their academic career) and expects from postdoctoral researchers – as well as university-based teaching and research activities – that they also contribute autonomously to the acquisition of third-party funds. At the same time, they contribute to the visibility of the University of Vienna due to their research output.

Predocs

The objective of a predoctoral phase at the University of Vienna is the PhD/doctoral degree and a qualification which is also sought abroad for a future academic career at another research establishment or in another academically based form of employment in the economy or with other non-university employers (see also chapter 3.1.2: Career Development of Early Stage Researchers). Predoctoral positions can be financed either by third-party funds or the global budget, in each case for at least three, usually four years. When applying for a relevant position, predoctoral candidates submit a letter of motivation including an outline of their ideas for

an intended doctoral project. The University of Vienna expects holders of predoctoral positions to give the public presentation of their doctoral project at the faculty within the first year in any case and to conclude the doctoral thesis agreement and, as well as carrying out the activity for the third party-funded project and fulfilling the research and teaching tasks assigned to them, to actively work on completing their PhD programme/doctoral programme before the end of their employment duration. The University of Vienna supports the achievement of these objectives by stipulating – as well as work on the PhD programme/doctoral programme and the doctoral project outside the employment relationship – 10 paid hours a week for making headway with the PhD programme/doctoral programme, especially the doctoral project, as part of the predoctoral employment relationship that is financed by the global budget. Another goal is to give as many as possible PhD/doctoral candidates who are employed at the University of Vienna the opportunity to make a contribution to university-based teaching.

Other forms of academic activity

The employment profile of **senior scientists** includes long-term academic use of large (mainly technical) infrastructures, which requires staff continuity. With their own research output, senior scientists support other academics in the use of the resources. As a rule, senior scientists are initially employed for a limited period of time; following a quality check, the relationships can be prolonged for an indefinite period.

External lecturers and **senior lecturers** need to be employed in line with the required functions on the basis of strategic considerations and under consideration of the existing framework conditions. External lecturers are employed especially to introduce professional practice and to include individual content not represented at the University as well as, if necessary, to safeguard the quality of degree programmes due to a lack of sufficient in-house resources. In the medium term, however, the reliance on external lecturers should again orient itself towards the first-mentioned original intention. Senior lecturers are employed especially where there is long-term need for additional teaching in the compulsory area of bachelor's programmes and they take part in regular task-specific continuing education and training programmes. As a rule, senior lecturers are initially employed for a limited period of time; the relationships can be prolonged for an indefinite period following a quality check.

Student assistants support the University in the provision of services in research and/or teaching. By employing them as student assistants, the University of Vienna aims to enable suitable,



successful students to gather experiences in collaborating in academic activities.

Due to earlier legal frameworks, the following groups are still employed at the University of Vienna: especially **tenured university professors** (with an activity profile analogous to those in a salaried employee relationship), **assistant professors with permanent employment contracts as civil servants, academic civil servants, and academic employees who were previously in a contractual relationship with the federation** as well as **federal and contractual teachers**, all of whom fulfil specific tasks in research and/or teaching and contribute to the services provided by the University of Vienna.

Non-academic university staff: service orientation, professional work organisation

The international competitiveness of a university is not only based on its academic performance but also on the quality and performances of its non-academic staff, who support it and, with their competences, shape and essentially

further develop service and support processes in particular and therefore strengthen institutional competitiveness indirectly. The commitment of each and every individual ensures that research and teaching function as smoothly as possible.

In the last decade, the pace of developments in the administrative and technical field has been similarly rapid as in the academic area. It is the goal of the non-academic university staff to provide the best possible support for the academic world of today – and also of tomorrow. This requires the continual further development of competences and skills, building on know-how and expertise, foresight and understanding of the system. The efficiency and performance of the non-academic university staff must measure itself against comparable academic institutions and also against comparable, successful economic enterprises which are active in the market. Well-qualified employees with a high level of commitment have various inter-university career options in competition with inter- and non-university applicants. Similar to the academic university staff, employee satisfaction constitutes a major element of an attractive and

competitive university for the non-academic university staff. Fairness, transparency and appreciative treatment by professional managers are just as important as diversity competence and gender knowledge.

Like in the academic sphere, excellent qualifications and a wide experience background are important for the non-academic university staff. In addition, the willingness to consider requirements and demands from many different perspectives (central/decentralised, differing specifics of the disciplines), with the objective of developing efficient and effective solutions which are valid for an as large as possible area of the University of Vienna, is a key requirement to be made on oneself.

In order to safeguard this appropriate, efficient, service-oriented and economic support of research and teaching activities at a high level on an ongoing basis, the members of the non-academic university staff and their superiors steadily further develop the quality of the services, business processes and structures and continually improve them by means of strategic procedures, task-oriented division of labour, balanced coordination, clear distribution of competences and evaluations. This is guaranteed by the commitment of the University of Vienna to ensuring the permanent modernisation and increasing digitalisation of the business processes, including an examination of central and decentralised tasks. One focus in this regard is currently – and will continue to be in the coming years – HR business processes (see chapter: 3.7: Infrastructure), which are being digitalised and simplified on a workflow basis as part of a comprehensive SAP conversion project. The qualitative and quantitative further development of the decentralised support structures will also be a focus in the next years.

3.5.3 Human Resources Planning and Procedures

The recruitment of new staff, which is conducted by including quality-assuring elements, the higher and further qualification of existing staff, the needs- and performance-appropriate distribution of staff positions within the University and enabling professional careers for the academic as well as the non-academic university staff in an interaction between mobility and institutional affiliation are key human resources policy measures which are of major importance for a strong university.

The autonomy of universities and the introduction of the Collective Bargaining Agreement for University Staff formed the basis for strengthening human resources planning, staff selection and human resources development within

the University. The University of Vienna carries out **strategic human resources planning** in a dialogue between the Rectorate and the heads of the organisational units. This comprises the anticipatory, needs-oriented conception that serves research and teaching objectives and concerns the filling of staff posts at all levels that have become vacant or are newly created, in particular also taking the strengths in research and needs in teaching into account. Here the University is required to realise a staff structure which is efficient and cost-effective, gender-sensitive, suitable for different generations and sustainable in the long term and which therefore also offers a fair chance of being employed and qualified as academic university staff for future generations.

According to the current legal situation, permanent professorships can only be advertised on the basis of a subject dedication as scheduled in the *Development Plan*. In the decision which **subject dedications** for professorships should be included in this *Development Plan*, the University of Vienna has made profile-enhancing changes in the planning of staffing in many cases in line with its research strengths (see also chapter 3.1.1: Research) and in line with the current and expected further development in and between the subjects. In addition, also with a view to the gradual extension of the new university funding scheme as included in the government programme, subject to availability of funds, a number of professorships are included in this *Development Plan* which are ‘lateral’ to established subjects or build bridges between subjects or close gaps and therefore, if they are implemented, promise to have particular potential for new developments in research and subsequently also in teaching. Criteria for the inclusion of professorships in this *Development Plan* have mainly been research-related aspects (also with reference to the faculties’ key research areas and to bridges that need to be built) and aspects related to the student-teacher ratios (needs in degree programmes – the need to supervise master’s theses and doctoral theses, and the need to implement the desired participation of professors in the teaching of basic courses). These criteria will again be considered by the Rectorate in its decision (section 107, para. 1 of the Universities Act) about the time when professorships are advertised.

For the purpose of enhancing flexibility and to take advantage of special opportunities on the academic labour market, based on section 99a of the Universities Act, a maximum total number of ten posts until 30 September 2023 is laid down for university professors, afterwards a maximum of another ten posts based on section 99a of the Universities Act until 30 September 2027 for university professors without subject dedication, which can be filled

in international competition for outstanding academic personalities (**‘opportunity hiring’**), so that in justified individual cases a swift appointment can be made by the Rector directly, with the objective of permanent employment while observing inter-university consultation rights as stipulated by law also without previous inclusion of a relevant subject dedication in the *Development Plan*. It would be desirable if section 99a of the Universities Act were legally amended so that (rather than an initial fixed-term appointment, as is currently mandatory within the scope of application of section 99a of the Universities Act, with the possibility of a later unlimited extension) an immediate permanent appointment were also possible in order to further increase the chances of attracting top academics to the University of Vienna.

The goal is to create **tenure track professorships** where existing staff positions become vacant, particularly in organisational units (faculties and centres) which reveal particular research potential. This will also facilitate high-quality research-led teaching. At the same time, fixed-term predoctoral and postdoctoral positions aim to ensure that flexibility in human resources policy is maintained or established.

The University of Vienna wants to focus increasingly on postdoctoral positions: The usually clearly longer terms of **postdoctoral positions** compared to predoctoral positions produce a structural imbalance in the distribution of funded positions to the disadvantage of the postdocs. In areas where the share of postdoctoral positions is currently low, possibilities of increasing this share need to be checked. In addition, subject to availability of funds, a new competitive programme will be created in which there are postdoctoral positions offered in all subjects which are competed for by applicants (uni:postdocs). The access requirements are intended to give equivalent opportunities to different subject groups. This programme will also be made visible and attractive for applicants from abroad in any case.

Quantities

Professors

The University of Vienna has included around 50 subject dedications for professorships in this *Development Plan*, subject to availability of funds, and seeks opportunities for funding these professorships. In particular, the University of Vienna is pursuing the goal, subject to the political implementation of the gradual expansion of capacity-oriented university funding, of raising the number of university professors (pursuant to sections 98 and 99 of the Universities Act, insofar as they are appointed for at least three years) from around 440 (or, if persons

are included who count as professors only for organisational purposes but not in terms of labour law pursuant to section 99, para. 6 of the Universities Act, from around 450) at the beginning of 2020, where at the beginning of 2020, due to the advertisement of numerous professorships in November 2018, numerous appointment procedures according to section 98 of the Universities Act were about to be concluded, which are not yet included in this figure, additionally to around 600 to 610 by 2024 (or, if persons are included who count as professors only for organisational purposes but not in terms of labour law pursuant to section 99, para. 6 of the Universities Act, to around 670 to 700), and then to around 620 to 630 by 2027 (or, if persons are included who count as professors only for organisational purposes but not in terms of labour law pursuant to section 99, para. 6 of the Universities Act, to around 740 to 790). Also the international comparison (see chapter 2.3: Financial Starting Point of the University of Vienna) reveals that the number of professorships at the University of Vienna is currently clearly still too low, in particular also in relation to the number of students and the number of awarded degrees.

The targeted increase by 2024 is to be achieved mainly through the following measures, which, however, require corresponding budgetary resources:

- Following the advertisement of numerous professorships in November 2018: successful completion of a high proportion of the ongoing appointment procedures pursuant to section 98 of the Universities Act. At the beginning of 2020, the Rector had received the appointment proposal from the appointment committee in 67 procedures (not yet concluded with entry into service) pursuant to section 98 of the Universities Act. It can be assumed here that many but not all of these ongoing procedures will successfully lead to an entry into service.
- Advertising and filling of the around 50 professorships as dedicated in this *Development Plan*, subject to availability of funds;
- Filling of the total number of up to 15 professorships as advertised at the end of 2020 based on section 99, para. 4 of the Universities Act for associated professors;
- Advertising (roughly in the year 2023) and filling of up to 20 further professorships based on section 99, para. 4 of the Universities Act for associated professors (see below);

- In addition, the number of university professors based on section 99, para. 1 of the Universities Act who are appointed for at least three years should also be increased to a certain extent;
- Legal inclusion of the holders of tenure track positions who have been recruited since 2016 based on section 99, para. 5 of the Universities Act, in each case upon fulfilment of the qualification agreement, in the group of university professors based on section 99, para. 6 of the Universities Act with an estimated total of around 70 to 90.

The goal is to achieve the desired increase by 2027 basically by implementing the following measures:

- Subject to rolling development planning to be carried out in 2023: earmarking of a number of additional posts for professorships based on section 99, para. 4 of the Universities Act for associated professors (for vacancies roughly in 2026) of an approximate total of 20;
- Legal inclusion of the holders of tenure track positions who have been recruited based on section 99, para. 5 of the Universities Act, in each case upon fulfilment of the qualification agreement, in the group of university professors based on section 99, para. 6 of the Universities Act with an estimated total of around 50 to 70.

In late 2016 the University of Vienna advertised up to 20 professorships based on section 99, para. 4 of the Universities Act for associated professors and filled them in 2017. In late 2020 another up to 15 professorships based on section 99, para. 4 of the Universities Act for associated professors were advertised. For another advertisement of posts, which is scheduled for approximately 2023, another number of posts for associated professors who can be appointed as university professors in a simplified procedure based on section 99, para. 4 of the Universities Act has now also been set at up to 20. For the future, additional advertisements of professorships based on section 99, para. 4 of the Universities Act for associated professors are planned about every three years so that in each case a certain number of associated professors can be appointed to a professorship.

Tenure track

In 2020, based on the accord reached with the Federal Government in the performance agreement for 2019–2021, the University of Vienna selected 10 subject dedications for additional tenure track professorships (uni:TT) from a large number of proposals elaborated within

the University, which were then advertised internationally in June 2020 and which are intended to contribute to the further development of the cross-faculty research specialisations available at the University of Vienna as well as to the development of new research areas with high potential, thereby also providing additional stimuli for university-based teaching. Subject to availability of funds, the University of Vienna will also strive to establish additional tenure track professorships (uni:TT) in the coming performance agreement periods, to be created through in-house competition within the University.

The result which the University of Vienna strives to achieve, subject to the budgetary implementation of the gradual expansion of capacity-oriented university funding, is to raise the number of filled tenure track professorships (“positions which can be taken into consideration for a qualification agreement within the meaning of section 27, para. 1 of the Collective Bargaining Agreement in the version applicable on 1 October 2015 and concluded according to section 108, para. 3 of the Universities Act”) from around 140 at the beginning of the year 2020 to between around 230 and 250 by the year 2024 and then to between around 300 and 320 by 2027.

3.6 Digitalisation

Opportunities and challenges of digitalisation

Digitalisation permeates all societal, economic, academic and cultural areas. In the narrow sense, it stands for the technical process of converting analogue signals into a digital form. In the broad sense, as understood here, it comprises the diverse and far-reaching changes that are connected with digital innovations and their effects on individuals, organisations and society.

For universities, this includes in particular new tasks and new areas of responsibility, such as exploring and shaping unknown phenomena related to digitalisation and the associated opportunities and challenges. The personal rights of those who work productively and/or receptively with digital instruments need to be observed. Digital innovations also give rise to substantial changes in the way services are provided in research, teaching and administration, as well as new forms of interaction between members of the University and with their environment.

The digital transformation creates opportunities and a new scope of action while also entailing risks and uncertainties. It changes our way of thinking, of conducting research, of teaching, learning and working together. Within this process, the University of Vienna takes an active and shaping role and a critical and reflecting role at the same time. As an institution producing and communicating knowledge, the University is required to raise and act on research questions resulting from digitalisation and to find adequate answers. In this way, it makes a significant contribution to social discourse and to the prudent shaping of current and future digital transformations in education, business, culture and society.

Starting point

Digitalisation is not new to the University of Vienna; it is found in a variety of projects and initiatives at all organisational units. In research, academics change research questions as well as their research practices and the research methods and infrastructures they use. The topic of digitalisation enjoys high attention in most of the third party-funded research projects acquired by researchers at the University of Vienna, and the University of Vienna is highly valued as a partner in relevant projects. In teaching, the development and use of digital technologies and infrastructures, didactic concepts and organisational solutions have been systematically promoted by teachers and students for many years and have been widened and intensified to a large extent in the wake of the COVID-19 pandemic. Finally, the University of Vienna invests in numerous projects

to improve its administrative processes, to position the evolved structures for the high dynamics of change, and to further develop cooperation in an explorative and incremental way using agile, open and straightforward approaches.

Quality and diversity as a potential for digitalisation

The University of Vienna has enormous potential for understanding the phenomena associated with digitalisation, which it draws from the quality, diversity, interconnectedness and relevance of its research.

For the University of Vienna, digital transformation also includes the activation of organisational resources and capabilities in order to be able to use digital innovations in such a way that they enrich university activities – also and especially in those areas of responsibility and fields of activity that are growing hand in hand with the digitalisation that can be observed in society as a whole.

The University of Vienna facilitates and promotes the acquisition of digital competences by all university members to jointly reflect on and actively shape the related processes, practices and services, the infrastructure and the University of Vienna's role in the digital ecosystem of education. The University of Vienna prepares its students for tomorrow's digital opportunities and challenges. It relies on its graduates' potential to act as multipliers in academia, the economy, culture and society.

Sustainability and impact

The University of Vienna is aware of its crucial role in the higher education sector and other areas of society. It advocates a sustainable digital transformation in terms of a reliable and humane design of digital products and services.

The digital transformation at the University of Vienna also has an effect on society. The society incorporates, realises and uses the digital innovations jointly shaped by the University. Thus, they serve as the basis for developing new digital innovations, new findings and new solutions.

Digital innovations address local, regional and international goals that extend far beyond the topic of digitalisation, from digitalisation initiatives of the City of Vienna or research and technology-related goals of Austria on to research programmes of the European Commission ('missions') to the Sustainable Development Goals of the United Nations.



Strategic aims

The University of Vienna is committed to shaping a European-style human-centred digitalisation, characterised by respect and responsibility towards all individuals in their diversity and the preservation and development of the cultural heritage. Aware of the special potential of the University due to its diversity and wealth of experience as well as the abundance of its contributions to innovation, this requires continuous critical and constructive reflection on the understanding of and attitude towards digitalisation.

The University of Vienna strives to open up new research areas and to create even more intensive networks at the interfaces between the academic disciplines. Digitalisation correlates with this expansion strategy: On the one hand, digitalisation helps meet the requirements and demands arising from new professorships, tenure track positions and additional measures regarding personnel and infrastructure. It stimulates interdisciplinary and inter-faculty collaboration and the creation and further development of the University's strategic priorities and cross-faculty research specialisations. On the other hand, the

numerous appointments in and around the field of digitalisation in turn have a positive effect on the development of subject-related and organisational capacities for the digital transformation at the University of Vienna.

The University of Vienna understands digitalisation as a cross-cutting issue and pursues the goal of an overall digital transformation that is designed actively and coherently. This goal is achieved by connecting and accompanying digitalisation projects, knowledge exchange and joint generation of digitalisation knowledge as well as coordinated efforts to advance digital transformation from a university-wide perspective.

Digitalisation advances researchers.

Digitalisation offers new approaches to traditional issues and itself is also the subject of research. In the course of digitalisation, new, universal phenomena and challenges for society are emerging that raise highly relevant research questions in many academic disciplines. To answer these questions and to shape the digital transformation, excellent basic research creates key findings in a plethora of disciplines and often also beyond disciplinary boundaries. These findings allow for

stimuli and the development of solutions through application-oriented and translational research. At the same time, digital technologies are being increasingly used as indispensable instruments in all academic disciplines. Digitalisation leads to a wider range of methods and tools used in research to collect, prepare, analyse, interpret and jointly use data, for example. Subject to availability of funds, the University of Vienna creates relevant structures and framework conditions and provides access to up-to-date and secure digital infrastructures that enable the appropriate archiving and sharing of data as well as meeting the increasing demand for digitally conveyed communication and high-performance computing resources (see chapter 3.1.1: Research).

Shaping digitalisation for students and teachers.

The University of Vienna has achieved a strong position as a university offering face-to-face teaching but it is also capable of offering suitable teaching contents in a digital format. Digital technologies do not only allow for innovative teaching concepts but also act as drivers for reshaping face-to-face teaching. Digitalisation opens up new opportunities for action in studying and teaching (see chapter 3.2: Studying and Teaching). Since it plays an important role in all academic disciplines, specific training opportunities from the variety of approaches and findings can also be provided to students in all degree programmes in order to understand, design and use digitalisation and thus be able to support humane digitalisation. Interdisciplinary training opportunities addressing digital competences, such as the technical, legal and ethical aspects of the effects of digital technologies, supplement the portfolio. They are adapted to the students' realm of experiences in different degree programmes and are appropriately linked to the disciplinary competences.

The University as a partner of the economy, academia, culture and society.

The University of Vienna is involved in the critical discourse about the opportunities and challenges of digitalisation. This discourse promotes extended communication of academically based contributions for the purpose of orientation on questions of social relevance as well as for reflecting on and shaping societal developments. In an instrumental view, digital technologies always enable new forms and formats of knowledge exchange, of technology transfer and of academic communication which promote involvement and participation, critical reflection and proactive shaping of societal development (see chapter 3.4: Impact of the University on Society – Exchange of Knowledge).

Attractive employer and professional organisation.

The general availability of digital technologies and innovations has changed people's expectations about an organisation over the past years. This concerns, for example, what digital user experience, what digital processes, services and infrastructures and what professional support of all these elements academics expect from their University for research and teaching and students for their studies, what future employers expect from graduates, what employees expect from their employer or what society expects from a professionally organised university. In order to further develop itself as an attractive employer, the University of Vienna is increasingly using digital technologies. It supports university members in fulfilling their tasks by providing suitable systems and infrastructures, creating appropriate organisational framework conditions and offering modern continuing education and training programmes.

The University of Vienna aims to meet the students' expectations for time- and location-independent access to digital resources, digitally conveyed interaction, efficient organisation of the studies and motivating feedback for active, committed and successful studying, and to prepare them for the future opportunities and challenges of digitalisation in the world of academia, the economy, culture and society. Employees are well versed in moving within a flexible, collaborative digital working environment, also thanks to the support received for developing digital competences. They experience recognition for their contributions through an open, also digitally supported feedback culture. They proactively seize the opportunities to improve working practices, processes and services through digital technologies (see chapter 3.5: Employees; and 3.7: Infrastructure).

Four overarching fields of action

For the strategic goals of research and career development of early stage researchers (cf. chapter 3.1: Research and Career Development of Early Stage Researchers), studying and teaching (cf. chapter 3.2: Studying and Teaching), knowledge exchange and technology transfer (cf. chapter 3.4: Impact of the University on Society – Exchange of Knowledge) as well as employees, administration and infrastructure (cf. chapters 3.5: Employees; and 3.7: Infrastructure), measures are being initiated and coordinated in close coordination between the business areas. In line with the understanding of digitalisation as a cross-sectional topic, the University of Vienna identifies four fields of action from a university-wide perspective in relation to the digitalisation projects as described in the relevant chapters:

(i) Promoting digital competences and organisational resilience

The University of Vienna provides training programmes, especially digitally conveyed ones, for the continuous, also self-organised further development of digital competences. The opportunity for all university members to participate in these programmes fosters the development of expertise in order for them to recognise the potential of digital technologies for their own respective sphere of work and help shape the digital transformation. These capacities, together with appropriate framework conditions, ensure organisational resilience in the sense of adaptability and resistance in a rapidly changing world, also through responsible, appropriate and secure use of digital technologies with lasting effect.

(ii) Coordinating digital transformation

The University of Vienna enables networks to be established and knowledge to be exchanged about the digital transformation activities conducted in the organisational units (faculties and centres, service units, cross-departmental structures such as research platforms) as a cross-cutting function. It carries out coordinating, moderating and advisory activities to bring together specialist competence and expertise, for example to identify joint needs for implementation projects and to develop coherent solutions from a university-wide perspective. The University also encourages cross-disciplinary and coordinated disciplinary initiatives aimed at digital transformation in organisational units.

(iii) Supporting the realisation of digital innovations

University members need competent and bundled advice and support for their digitalisation activities and projects in research, teaching, knowledge exchange and administration, from the conception to the results stage. For this purpose, the University of Vienna creates structures and frameworks, provides appropriate support and services as well as access to up-to-date and secure digital tools and infrastructures. This is intended to simplify the implementation of digital innovations on the one hand and to ensure responsible, appropriate and secure use of digital technologies on the other.

(iv) Improving digital processes and cooperation

Digital technologies are used in such a way that they improve university processes and services and provide all university members with the best-possible support when they are carrying out their tasks. Digital transformation acts as a catalyst for open and collaborative ways of

working in research, teaching and administration. The joint development of knowledge, the solution-oriented and prudent collaboration for the implementation of digital innovations, the sharing of experiences and critical reflection on them are intensified both within the University and with cooperation partners.

Digitalisation based on ambition and prudence

In general, the University of Vienna strives to seize the opportunities offered by digitalisation in all its areas ambitiously and prudently to promote academic excellence, innovative teaching and high-quality and efficient organisation and administration. Using digital innovations should foster its strategic development, strengthen its international competitiveness in research and teaching and help exert wider impact of university actions.

3.7 Infrastructure

The University of Vienna endeavours to provide its members with the best possible infrastructure while taking into account dynamically changing work and study conditions at the University. The aim here is, in particular, to take the necessary precautions in good time so that research, teaching and studies at the University of Vienna can be at an internationally competitive level also in the future.

Major infrastructure projects from the previous development planning period have meanwhile been implemented. This mainly applies to the new University of Vienna Biology Building – a project of highest priority. It is being built in the third district of Vienna by Bundesimmobiliengesellschaft (the federal real estate corporation or BIG) and is planned to be fully up and running as of the winter semester of 2021/2022. In the next years, other important steps will be taken regarding the location concept.

The implementation of capacity-oriented university funding and the increase in expected third-party funding will continue to lead to

additional demand for space (offices, laboratories). For this purpose, additional funds are still required, which would have to be raised from the share – still to be negotiated – of the University of Vienna in the legally stipulated overall budgets of universities for the performance agreement period 2022–2024.

Future investments are also required in the research infrastructure and in the IT infrastructure. Here the provision of a future-oriented research infrastructure in core scientific facilities is a major concern. In the field of the IT infrastructure, future investments comprise both regular reinvestments in the field of high-performance computing and, in the course of the digitalisation strategy, increasingly also in the basic IT infrastructure among other areas. Facility management and the services provided by the Vienna University Library are continually further developed, geared towards the needs of members of the University.

To ensure careful handling of public funds, the University of Vienna will continue to pay special attention to searching for potential savings and efficiency increases to enhance quality.



Location concept

Goals and foundations

The University of Vienna is an inner city university with main locations in the 1st, 3rd and 9th districts of Vienna. The foremost goal is to ensure that the infrastructure needed for research, studies and teaching such as offices, lecture halls and laboratories is available in the required quality and quantity.

With its location concept, the University of Vienna is pursuing the objective of forward-looking planning. This means that the required steps are taken in time to ensure that students and academics enjoy good conditions for studies, research and teaching with lasting effect. Against the background of rapid academic developments and dynamic changes in framework conditions, this requires both timely preparation and proactive approaches as well as sufficient flexibility for short-term responses and seizing of opportunities.

Academic and study-related requirements, always with a view to research and teaching/studies of the future, are the basis of the location concept. This implies forward-looking planning related to future space requirements and a regular and systematic analysis of existing buildings, their possibilities and their needs (in a business respect; perspective of occupational health and safety, fire safety, accessibility). In the foreground there are always academic and study-related criteria as well as the search for synergies related to academic issues.

Consolidations of locations are therefore not only implemented for spatial efficiency reasons but also, in particular, to create academic added value and to increase the functional use value for the members of the University. Here there is particular focus on promoting academic exchange between related disciplines and beyond the boundaries of academic disciplines. The merging of units also encourages communication and thus contributes to making the University of Vienna an attractive 'living space' for its members, where the buildings serve the people rather than vice versa.

Implementation

The planning and implementation of relevant measures such as merging or abandoning of locations and the realisation of restoration measures are all geared towards the location concept. The roadmap for implementation has a long-term perspective here and, particularly in larger projects, it requires the availability of additional funds and corresponding consensus with the responsible ministries. To achieve the goals related to the location concept, the support of the

Austrian Federal Ministry of Education, Science and Research (BMBWF) and the corresponding approvals from the Federal Ministry of Finance (BMF) are required. The location concept also forms the basis for notifications by the University of Vienna according to the infrastructure road-map (section 118 of the Universities Act).

The concept is adapted at regular intervals depending on the progress made in implementation and the resulting changes. In the implementation process, it is ensured that locations and buildings have a high degree of flexibility and allow future adjustments to new requirements which cannot be anticipated at present.

Currently ongoing major projects with a duration of several years

- Implementation of the new University of Vienna Biology Building on Carl-Djerassi-Platz in the 3rd district of Vienna;
- continuation of fire safety measures in the Main Building;
- increasing the number of usable rooms in the existing buildings at Währinger Strasse 38-42 to cover space required for the Faculties of Chemistry and Physics;
- renovation of the refrigeration supply in UZA2;
- implementation of the step-by-step plan to achieve structural accessibility.

Projects planned – existing challenges

As well as currently ongoing major projects, in the medium term comprehensive and sustainable solutions are required from the perspective of the University of Vienna for the areas of the social sciences and parts of the Faculty of Historical and Cultural Studies. A notification according to the infrastructure roadmap has been made. The large library project has been submitted as a consensual project in accordance with the university real estate ordinance (Universitäts-Immobilienverordnung): a joint library depository for several Viennese universities, a lasting solution for the evacuation situation in the Main Building and reuse of the space which will become vacant due to the depository. Implementation of the project in the current development planning period is required.

The University of Vienna sees another critical area as the location Gymnasiumstrasse/Franz-Klein-Gasse, where solutions are required in the medium to long term.

The extension of the Vienna underground lines U2 and U5 affects the University of Vienna at several locations: During the construction period, temporary relocations will be necessary, e.g. in the area of the Main Building. Temporary as well as permanent highly equipped alternative laborato-

ry space will be needed for highly sensitive experiments of the Faculties of Physics and Chemistry during the period of construction and operation of the new underground line U5 in order to not jeopardise the position of the University as a top research institution by interferences caused by the U5 (vibrations, electromagnetic disturbances, moving masses). Furthermore, the University aims to reuse the preclinical building of the Medical University of Vienna, which will become vacant in the future, in order to guarantee lasting laboratory capacities and extension options also for the STEM subjects.

Regarding the Campus, measures will continue to be implemented with the aim of positioning it more strongly as a meeting place for academia and the public. The result of the competition on the design of public spaces will be implemented gradually, subject to availability of funds. The use of space on the Campus where construction is permitted in order to create a facility where sensitive physics experiments can be conducted is being explored.

Due to rapidly changing framework conditions or requirements in connection with professorial appointments, immediate and non-bureaucratic solutions will also be needed for some areas of the University of Vienna. Sufficient autonomous leeway is also necessary for opportunities arising in the short term which are related to the location concept (such as rentals to create synergies) and for infrastructure measures associated with appointments.

Future additional space required

The implementation of this *Development Plan*, especially the professorial appointments, and the desired enhanced dynamic in the area of third-party funding will lead to additional space being required at the University of Vienna which cannot be covered with currently existing areas and/or not without additional funding. This applies in particular to the laboratory areas where an increase in capacities can only be implemented with difficulty in the short term and leads to considerable additional expenses in the medium term. The University of Vienna assumes that it will be provided with the funds required for successful implementation and with the autonomy required for the swift implementation of rentals or new constructions and also emphasises the necessity of introducing FWF overheads to cover costs.

With the rental of the office building in Kolingasse, a first step was taken to meet space requirements. In the area of laboratories, the additional space requirements have not yet been met.

Occupational health and safety, accessibility, fire safety

The University of Vienna is committed to complying with occupational health and safety as well as fire safety and to implementing accessibility. When planning all construction projects, especially new building projects (such as the new University of Vienna Biology Building), attention is paid in good time in advance to ensure compliance with the applicable legal provisions.

In the area of occupational health and safety, prevention will continue to be one focus. The evaluation of psychological stress at the workplace has provided additional approaches for dealing with this matter.

The upcoming new building projects and the continuation of the consolidation of the locations will lead to further improvements in accessibility. In addition, there is also ongoing work in the existing buildings to gradually improve accessibility as far as possible. Respective measures are being implemented as part of a multi-year project.

As well as currently ongoing restoration work on the fire safety infrastructure in cooperation with the buildings' owners (such as fire safety measures in the Main Building), improvement measures are being actively implemented in the field of organisational fire safety. This concerns the compilation and regular updating of specific regulations for the individual locations (property-specific regulations), implementation of the required training as well as regular evacuation drills.

To implement measures which require comprehensive renovations that are not within the scope of responsibility of the respective building owner or which are based on future changes of legal provisions, additional funds will continue to be needed.

Facility management

In the field of facility management, the goal is to focus more on the operational core tasks. Here the aim is to improve quality while enhancing cost efficiency at the same time. This focus will also be ensured – where necessary – by involving external services and will be accompanied by relevant training and human resources development programmes for the staff members.

Against the background of scarce resources, one major challenge continues to be work on efficient use of space. The planned further development of space management with special consideration of a needs-oriented and balanced allocation of space is a prerequisite for enhancing space efficiency. One precondition in this respect is also the further digitalisation of spatial manage-

ment. Where possible, the creation of centrally managed pools of office rooms for project staff as well as the use and allocation of course rooms during the periods without classes by Conference and Event Management helps ensure appropriate utilisation of space.

Construction project management will be further developed with a focus on further standardising the processes. Here, one main emphasis in the further development will be the contribution made in the appointment process.

The planned establishment of a green building strategy will enhance the ecological footprint of the university buildings to ensure sustainability and, at the same time, aims to achieve a long-term cost reduction (with a focus on the building lifecycle). In building projects and building renovations, attention is still paid to installing multifunctional service and communication areas for the students. The establishment of additional 'student spaces' enhances the University of Vienna as a 'living space' with the addition of places of learning and communication.

Research equipment

The University of Vienna will continue to invest massively in the research equipment infrastructure. Access to top-notch equipment infrastructure – especially in the STEM disciplines, which are characterised by high demand for equipment – has a direct impact on the possibility of appointing top researchers from Austria and abroad, acquiring competitive third party-funded projects, gaining distinguished academic prizes and publishing papers in the best journals and publication media of the respective discipline. With investments, also as part of appointments, it is planned to further expand existing cross-faculty research specialisations of the University of Vienna (see chapter 3.1.1: Research) and provide targeted support for new cross-faculty research specialisations which are currently being established. Only in this way can it be ensured that the University of Vienna will also continue to rank among the leading international research institutions in the future. The University of Vienna therefore also makes an essential contribution to the international visibility of the research location Austria.

When acquiring large research equipment, the University of Vienna continues to pay increased attention to possibilities of joint acquisitions beyond the boundaries of academic disciplines and to cooperative use in central core facilities and large equipment facilities. The goal of the University of Vienna is cooperative use of equipment, including beyond the boundaries of institutions. Successful examples of this already exist in the field of life sciences, for instance. With the new University of Vienna Biology Building project there is the possibility of extending the joint use

of equipment especially due to the collaboration of researchers of the University of Vienna and together with the Medical University of Vienna, the Austrian Academy of Sciences (ÖAW) and the Institute of Molecular Pathology (IMP). With appropriate regulations which need to be defined jointly and with organisational framework conditions, fair access to these resources needs to be safeguarded for those involved.

The currently existing models for cooperative use of equipment within the University of Vienna will be harmonised based on best practices common in different subjects. In this way, equipment centres are created within the University which pool academic expertise and services for academics and are another starting point for interdisciplinary and transdisciplinary cooperation at the highest level.

The University of Vienna sees its international orientation as a major starting point for opening up cooperation options and actively using competitive opportunities. The University of Vienna will also continue participating in international research infrastructures such as the European Southern Observatory (ESO), the Centre Européen de Calcul Atomique et Moléculaire (CECAM), the HPC Initiative of the European Union and in ESFRI/ERIC research infrastructures, such as LTER/eLTER aiming at long-term ecosystem research.

The joint acquisition and use with other universities and research institutions continues to gain in importance. In the area of large scientific IT infrastructure, one key project is the Vienna Scientific Cluster (VSC), which is funded by several Austrian universities (under the auspices of the University of Vienna and TU Wien). To remain competitive in the area of supercomputing at the academic level and continue to be able to provide the academics of the University of Vienna with the required computing capacities, it will be necessary to make regular investments.

To strengthen the universities' initiatives, the University of Vienna advocates that public funding authorities also help pay the costs for using equipment and user fees as part of awarded projects.

IT infrastructure

The main goal in the field of IT infrastructure is to ensure the best possible provision of IT equipment to the university members in an environment that is dynamic from an IT perspective and offers permanently changing framework conditions (e.g. IT trends such as cloud solutions, social changes, legal norms such as the General Data Protection Regulation). Early recognition of changes and a proactive approach are therefore essential. In addition to necessary reinvestments

in the basic IT infrastructure and its expansion due to the ongoing digital transformation, particular attention will continue to be paid to the area of IT security.

Similarly important is early and targeted communication with the users in the further development of the IT infrastructure and IT services. This concerns all services, but especially also large IT services such as u:space (see chapter 3.2: Studying and Teaching) and HR4u: (see below). Where this is possible and useful, these further developments are implemented using agile software development.

The diversity of the University of Vienna and the particular demands arising from its tasks in research and teaching have the result that typical industry standards can only be applied and implemented to a limited extent. Nevertheless, to ensure economic efficiency, standard products and standardised processes and systems are applied where possible, especially in the area of administration.

The University of Vienna accepts the specific challenges of the next years in the field of the IT infrastructure particularly by pursuing specific objectives and implementing relevant measures in the fields of research, teaching and studies as well as administration:

The objectives in the field of the contribution made by IT to university-based research include, in particular, the continuation of cooperation in the area of high-performance computing (see above), further developments to support research and teaching in the setting-up and expansion of the field of digital humanities, as well as measures in the field of digital preservation and open access. In order to be able to conduct excellent research, non-physical infrastructures are required in particular with regard to a wide variety of data, archives and repositories. Other measures supporting researchers relate to research project management (u:cris) and continuation of the University's cloud solution (u:cloud), for example.

IT will make a significant contribution to the success of teaching and studies in the future by consistently continuing using u:space (IT-assisted applications, teacher interface, registration system, e-curriculum, Mobility Online, etc.). This area also continues to support new approaches in the teaching/learning environment by further developing software and hardware, e.g. in the field of e-learning (Moodle) or streaming (equipment of lecture halls) and develops them further by gearing them towards the needs of teachers and students.



In the area of administration and related services, the main IT project in the next years is the implementation of the HR4u: project. This project comprises the acquisition and implementation of a modern, efficient system which provides IT-based support for HR tasks of the University of Vienna.

Vienna University Library and Archive

The goal of the University of Vienna is to ensure the university members are provided with information resources for research, teaching and studies in a future-oriented way, including in areas with public access. The University Library enables user-oriented and efficient access to high-quality library resources. Regarding the offered services and their further development, the focus is on the needs of the university members.

This means that – as well as the modern, digital supply of information, which plays a central role in the world of academia and libraries – the demand of some specialist disciplines for information in traditional book form continues to be taken into account. The changes in the world of media entail continuous further developments and a needs-oriented adjustment of services and supporting technologies.

In the field of core tasks, existing offers will therefore continue to be further developed with orientation towards demands and the needs of the library users and, especially, also the students and the course literature which is necessary for them. This also includes the programmes for teaching information literacy. The library premises are gradually adapted according to the international standards for research-based learning.

The continuous consolidation of locations, i.e. the reduction of locations by merging them into larger library units is being continued to make it possible to offer more services to academics and students (such as extending opening hours).

The special services to support researchers and teachers (such as archiving research data, using open educational resources, digitisation of course literature) and service-style tasks for the entire University (such as bibliometrics and scientometrics, support in the development of publication strategies) are being consistently extended in dialogue with the users. This also relates to services in the field of open science (open access, open (research) data, open educational resources, open innovation). For the general objectives of the University of Vienna in the field of open access see chapter 3.1.1: Research. These services in particular require cooperation and collaboration at the national and international levels, which is ensured by participation in relevant networks and projects.

As well as preparing and storing information resources, the provision of information resources to researchers, teachers and students also constitutes a major part of the service portfolio. As part of its Third Mission, services are also offered for the interested public and schoolchildren.

The Vienna University Library and the Vienna University Archive document the history of the University of Vienna regarding its culture and scholarship (650 plus – History of the University of Vienna). By maintaining, appraising and presenting historical groups of items and academic special collections, the University of Vienna contributes to the preservation of significant cultural assets.

3.8 Quality Assurance

Top quality in research and research-led teaching is the primary objective of the University of Vienna. The reflection and agreement on what constitutes quality in research and teaching, self-assessment of one's own performance, and continuously striving for improvement are established practice in research, teaching and administration. Quality assurance is the task of all institutions of the University and of all members of the University in their respective areas of responsibility with the goal of achieving top quality in research and teaching, solving academic questions or being successful in international competition while not being content with average performance levels. The quality culture addressed here forms the backbone of quality assurance at the University of Vienna. The specific quality assurance instruments and processes particularly aim to strengthen this quality culture and contribute to its further development.

Quality assurance at the University of Vienna pursues the objective of making its continual orientation towards quality and international standards a practical reality. In a comprehensive sense, quality assurance elements are integrated or need to be integrated in many areas: the appraisal of research achievements (see chapter 3.1: Research and Career Development of Early Stage Researchers), personnel-related decisions, particularly professorial appointment procedures and the tenure track process (see chapter 3.5: Employees), curriculum development and teaching processes (see chapter 3.2: Studying and Teaching), and the continuous improvement of service quality (see chapter 3.7: Infrastructure). Quality assurance-related findings are included in decision-making and control processes.

In line with the quality culture, the responsibility for quality is distributed over various levels and a series of bodies, boards and stakeholders. Assuming responsibility at each of these levels and the constructive cooperation of everyone involved are essential for the quality assurance system. The shared responsibility for quality means it is possible to pay attention to the specific requirements of the different disciplines and subjects and puts this responsibility into the hands of competent people. Accordingly, procedures and instruments of quality assurance are designed so that specific conditions and requirements of different subjects are taken into consideration.

The University of Vienna continues to attach much importance to crucial input from outside, such as from international experts in scientific advisory boards, and with its regular examination of internal quality assurance processes. Cooperation with the Austrian Agency for Research Integrity will be continued.

Further development of quality assurance measures/quality audit

In 2015 the Swiss Accreditation Council certificated the quality assurance system of the University of Vienna. It confirmed that the quality assurance system of the University of Vienna meets the requirements as stipulated in the 2002 Austrian Universities Act and the Austrian act on quality assurance in higher education, (Hochschul-Qualitätssicherungsgesetz, HS-QSG). Based on the requirement of this quality audit, the University of Vienna developed a package of measures in 2017 which relates to the quality assurance process of the examination procedure and is intended to have lasting impact (see chapter 3.2: Studying and Teaching). A re-audit of the quality assurance system has to be conducted by June 2022. The results of the quality audits, international developments in the field of quality assurance as well as recommendations of the Scientific Advisory Board of the University of Vienna are taken into account for the further development of the quality assurance system (processes and instruments).

Comprehensive evaluation of organisational units

All organisational units (faculties/centres and service units) are evaluated at regular intervals, in a seven-year cycle, based on the principle of the 'comprehensive evaluation'. In this process, all performances are jointly subjected to a peer review process in several stages. Within the framework of a comprehensive concept, focus topics of the evaluation are determined in advance jointly by the Rectorate and the head(s) of the organisational unit to be evaluated. Based on the results of the evaluation, an implementation discussion is held between the Rectorate and the head(s) of the organisational unit where the results of the evaluation are discussed and specific measures are agreed. The agreed implementation measures and the achievement of objectives are monitored as part of the target agreements between the Rectorate and the faculty/centre or service unit.

High-quality personal evaluation procedures

The performance of a university builds especially on motivated and qualified academic staff at all levels. Tenure track professorships and university professorships in particular play a major role here. Here the most important goals at all academic career levels are a transparent, efficient and quality-assured procedure and the potential of the University of Vienna to recruit, promote and keep the best academics in its international competition with other establishments (see chapter 3.5: Employees). Appointment procedures are a focus topic of the re-audit.

Quality assurance in studies and teaching

Quality assurance in studies and teaching is achieved through a bundle of measures, such as regular evaluations of courses, graduation surveys and tracking of graduates entering the Austrian labour market (only Austria due to the lack of other available data) in cooperation with Statistics Austria. Specific surveys on individual services support the further development of the available degree programmes and the curricula, the planning and organisation of teaching as well as different forms of teaching: face-to-face teaching, digital teaching and hybrid teaching. The time span ranges over the entire student life cycle, from the introductory and orientation period to graduation and postgraduate education. The findings are incorporated into the further development of the degree programmes. Special attention is paid to the further development of quality assurance in the area of teaching (e.g. implementation of the course evaluation 'Online with student attendance'), standards of examinations, since the summer semester of 2020 also of digital examinations; topics related to study feasibility) (see chapter 3.2: Studying and Teaching). Quality assurance in the area of continuing education and training is a focus topic of the re-audit.

Quality assurance in research and in the promotion of early stage researchers

Quality assurance in research extends beyond a comprehensive evaluation. One focus is on the further development of key research areas, the University's strategic priorities and cross-faculty research specialisations. It is necessary to continue discussing the question of how impact is defined in more detail, also with a view to social impact (see chapter 3.1.1: Research). Measures to enhance the impact and visibility of research results are accompanied by quality assurance measures. Quality assurance in doctoral programmes is ongoing and is ensured by measures such as the admission and the public presentation at the faculty, the progress reports, on to the completion of the doctoral thesis, typically with external reviews and the public defence. In addition, quality assurance of doctoral schools will be further developed and a focus will be placed on quality assurance in the area of postdoctoral researchers (especially university support programmes) (see chapter 3.1.2: Career Development of Early Stage Researchers). Quality assurance in doctoral programmes is a focus topic of the re-audit.



4. Key Research Areas of the Faculties and Subject Dedication of Professorships

4.1 Faculty of Catholic Theology

4.1.1 Objectives

In view of society's pluralistic worldviews in the 21st century, the question arises how religion can contribute to identifying problems, crises, and challenges of the present day, as well as finding answers and solutions. The Faculty of Catholic Theology is pursuing such a task in cooperation with the Faculty of Protestant Theology, the Department of Islamic-Theological Studies, as well as other departments and faculties. In its research and teaching, the Faculty of Catholic Theology examines religious traditions and phenomena with regard to approaches to meaning and perspectives for action, especially those of Christianity, against a background of critical dialogue. On this basis, it develops perspectives for a democratic, humane social system oriented towards social justice. It examines the religious and cultural heritage from the point of view of theology, philosophy, empirical approaches, as well as religious studies to provide the background for understanding key occidental concepts and ideas, whose origin cannot be fully grasped without the Judaeo-Christian tradition and other religious narratives and practices. Together with the historical and philosophical disciplines, the humanities, cultural studies and the social sciences, it contributes to the hermeneutic examination of religious motifs and their transformation. It applies interdisciplinary and transdisciplinary methodologies oriented towards interreligious and intercultural approaches, committed to the heritage of Enlightenment, secularity, and the rule of law.

4.1.2 Thematic Areas and Key Research Areas

The Faculty of Catholic Theology particularly focuses on three thematic areas: firstly, Catholic theology in contemporary discourses; secondly, interdisciplinary religious research; and thirdly, ethical challenges faced by society.

(1) The Faculty offers its disciplinary specialisations and hermeneutics in order to elucidate the biblical, historical, institutional, theological, philosophical and practical foundations of Christianity, which are examined with regard to their effects on modernity's struggle to achieve human autonomy and respect for others. However, it also provides a critical analysis of, and attention to, social developments – as, for instance, in its interdisciplinary research on human values. Regarding (2) interdisciplinary religious research, the Faculty can build on its constitutive interdisciplinary basic structure, and it is committed to bring together the expertise of different academic disciplines engaged in religious research at the University of Vienna in order to create synergies. (3) The Faculty examines a wide variety of ethical issues (climate crisis, modern technologies, migration and poverty, gender equality, political ethics, medical ethics, etc.). Based on a Christian anthropology, its expertise in the areas of philosophy, religious studies, social ethics and theological ethics provides considerable input to academic reflection on these topics.

The thematic areas of the Faculty of Catholic Theology are reflected in the structure of its disciplines, with the location in Vienna – situated between Central, Eastern and South-Eastern Europe, as well as between Catholic and Eastern

Church traditions – playing a special role in this context. They encompass biblical, historical, systematic and practical theology; ethics; as well as intercultural philosophy of religion, religious studies and law of religion.

Religion and Transformation in Contemporary Society

This joint key research area, which takes account of the main focuses of the Faculty, examines the question of the extent to which religions have formed, and are being changed by, the narratives, horizons of meaning and of life, and the values and institutions of society. In addition, it examines the way in which religions, notably the Catholic Church, have responded to the global challenges of the present day: loss of traditions and identity, debates on diversity and particularly gender, climate change, limited ecological resources, enlightenment discourses, migration and multiculturalism, religious pluralism, religious fundamentalism, urbanisation, digitalisation, inequality and injustice, etc. It addresses exit strategies with regard to phenomena of global and personal crises related to the meaning of life, and their consequences for ethics, politics, education, law and aesthetics. For instance, transformative processes in the religious cultures of modern-day Austria are studied, e.g. in the context of migrant groups in educational and school settings. Finally, specific attention is paid to the transformation of the question of God and of religious motives, which has become apparent in art, and especially in contemporary literature, not least with regard to its potential for examining current social developments. Additional emphasis is given on the transformation of Christianity's self-understanding from its contact with Judaism, millenarian and apocalyptic beliefs, as well as the interpretation of religious texts and their normative, ethical, aesthetic, legal and practical implications.

4.1.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any subject dedication of professorships, nor the ones dealt with in the following section.

- Biblical Studies (Old Testament)
- Christian Philosophy
- Church History
- Dogmatics
- Eastern Christian Studies

- Ecclesiastical Law and Law of Religion
- Fundamental Theology
- Liturgical Studies and Sacramental Theology
- Moral Theology
- New Testament Studies
- Old Testament Studies
- Pastoral Theology
- Religious Education and Catechetics (joint appointment with the Centre for Teacher Education)
- Religious Studies
- Theology of Spirituality

4.1.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Social Ethics

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Old Testament Studies

Time of appointment:

following vacancy of the Professorship of Biblical Studies (Old Testament) (presumably as of 1 October 2022)

Subject dedication of professorship:

Christian Philosophy

Time of appointment:

following vacancy of the Professorship of Christian Philosophy (presumably as of 1 October 2025)

Subject dedication of professorship:

Religious Education and Catechetics

Time of appointment:

following vacancy of the Professorship of Religious Education and Catechetics (presumably as of 1 October 2027)

4.2 Faculty of Protestant Theology

4.2.1 Objectives

The Faculty of Protestant Theology of the University of Vienna is Austria's only research institution that focuses on Protestant theology at the university level. It is therefore important that all subjects of Protestant theology are covered (i.e. Old Testament, New Testament, church history, systematic theology, practical theology, religious education and study of religions). In accordance with the traditions of these subjects, close links have been established to related disciplines such as ancient oriental studies, Egyptology, archaeology, education, Byzantine studies, historical studies, Islamic studies, Jewish studies, Coptic studies, history of art, cultural anthropology, literature studies, philology, philosophy, psychology, law, sociology, etc.

The Faculty of Protestant Theology is integrated in academic networks in the region of Vienna, in Austria as well as at an international level, and has continuously intensified academic cooperation. It makes a fundamental contribution to social discourse on religious and ethical orientation from a Protestant perspective. Its research strategies are aimed at:

- continuing a clearly focused research profile in which the Faculty's resources and structures are allocated to existing research areas in the best possible way;
- performing high-quality research to enhance the international standing and attractiveness of the Faculty;
- maintaining the Protestant academic tradition – which is fundamental for the Faculty – of exchange with other university disciplines in Austria, with a view to its public impact;
- enhancing the cooperation with the Faculty of Catholic Theology, the Institute for Islamic Studies, (including Islamic religious education), as well as with the Centre for Teacher Education, and making the University of Vienna an internationally attractive location for investigating the ecumenical and interreligious dimensions of theology. The Faculty of Protestant Theology therefore strives to increase expertise among the individual academic disciplines involved in religious research at the University of Vienna. The goal of these endeavours is to sustainably support the cooperation between the institutions involved in religious research and to complement them, whenever possible, by providing expert input with regard to the sociology of religion. In this way, the religious

research at the University of Vienna can be made even more visible at the international level.

4.2.2 Thematic Areas and Key Research Areas

The Faculty focuses its research on two areas: sources of Christianity, and religion and theology in a pluralistic society, with a total of four key research areas.

The thematic area of sources of Christianity comprises the investigation, based on methodological reflection, of the Bible and other sources of Christianity in their specific historical contexts, as well as of the history of their interpretation and reception, as a fundamental element of how European culture understands itself and underpins its own identity. A goal of this thematic area is to understand Christianity as a religion that is rooted in history, through researching its origin, beginnings and developments.

The thematic area of religion and theology in a pluralistic society includes the study and analysis of, and critical reflection on, religion in modern society, at the interface of internal and external perspectives. The focus of this thematic area is on increasing expertise in religious analysis and on intensifying the current social discourse through conducting appropriate studies.

Investigation of the biblical writings (sources of Christianity)

The Bible is the main source of Christianity and one of the central documents of Western cultural and intellectual history. The historical-critical and literary study of the Old and New Testaments, as well as the history of their interpretation and reception are of great significance for Protestant theology.

Investigation of the sources of the history of Christianity (sources of Christianity)

In addition to the Bible, a great variety of other sources also confirm the process of Christian 'inculturation' over the course of centuries. In order to understand Christianity as a religion with a historical dimension, the historical-critical and literary study of these sources, as well as the history of their interpretation and reception, are of key relevance for Protestant theology. The focus is particularly on sources from the first six centuries, the history of Protestantism in Austria and South-Eastern Europe, as well as on Protestant thinkers of the modern period.

Perception and communication of religion in a pluralistic society (religion and theology in a pluralistic society)

In the present day, the complex phenomenon of religion, as well as religious education processes, can only be appropriately studied and analysed by combining different methodological approaches that reflect the contrast between the internal theological perspective and external perspectives (study of religions, psychology of religion, sociology of religion, as well as philosophy of religion, education and cognitive science). Protestant theology thus faces two challenges that need to be brought into the discourse together. From the internal perspective, the processes of communicating the Gospel on the one hand, and contemporary religious cultures on the other, are analysed and critiqued on the basis of Protestant theology. From the external perspective, religions are presented descriptively and empirically, and analysed and critiqued in the context of modern civilisation. Here, a specific focus is on the reflection on interdenominational and interreligious dialogue in the context of Europe and the Middle East.

Theology and ethics in academic discourse (religion and theology in a pluralistic society)

Views of human beings and ethical ideas are strongly influenced by religious ideas and traditions, which need to be reflected on in a

critical way. Under the conditions of modern pluralism, the need of both church and society for an ethical discourse is increasing, and calls for ethical reflection on the part of theology and other disciplines. Here the focus is on questions of anthropology, interfaith medical and nursing ethics, pastoral care as well as the study of ecclesiastical charity. We are therefore continuing our cooperation, as equal partners, with the Faculty of Catholic Theology, the Faculty of Law and the Medical University of Vienna in the areas of ethics and law in medicine.

4.2.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. For information purposes, the research areas that are currently covered are provided in square brackets. The names outside the square brackets give the official designations. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Church History
- Church History [Regional Church History]



- New Testament Studies
- Old Testament
- Old Testament Studies
- Practical Theology
- Reformed Theology [Systematic Theology: Reformed Confession]
- Religious Education
- Study of Religions
- Systematic Theology: Lutheran Confession

4.2.4 Subject Dedication of Future Professorships and Status of Implementation

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:
Church History (History of the Reformation and Protestantism)

Time of appointment:
following vacancy of the Professorship of Church History [Regional Church History] (presumably as of 1 October 2023)

Subject dedication of professorship:
Religious Studies

Time of appointment:
following vacancy of the Professorship of Study of Religions (presumably as of 1 October 2024)

Subject dedication of professorship:
Practical Theology

Time of appointment:
following vacancy of the Professorship of Practical Theology (presumably as of 1 October 2024)

Subject dedication of professorship:
Reformed Theology (Systematic Theology: Reformed Confession)

Time of appointment:
following vacancy of the Professorship of Reformed Theology (presumably as of 1 October 2025)

Subject dedication of professorship:
Religious Education

Time of appointment:
following vacancy of the Professorship of Religious Education (presumably as of 1 October 2027)

4.3 Faculty of Law

4.3.1 Objectives

The Faculty of Law at the University of Vienna ranks among the leading European law faculties. This position results not only from the excellent academic research in a broad variety of fields but is also due to the wide range of subjects taught. In both research and teaching, the Faculty is striving towards practical relevance, international impact and basic research.

In line with the Faculty's commitment towards society, its academic teaching aims at preparing the students for future employment and training them in traditional legal professions. The internationalisation of law is gaining importance in the Faculty's activities. The Faculty therefore aims to preserve comprehensive expertise in all subjects, which means pursuing a research strategy that covers a wide range of areas. All subjects listed in the key research areas also require close collaboration between different fields of law.

The Faculty of Law constantly aims at engaging further with legal practitioners and thus to contribute to applied research at national, European and international levels. At the same time, the Faculty is committed to an orientation towards basic research in all areas of law. The Faculty has a pre-eminent position with regard to the output of legal publications in Austria, which it seeks to strengthen even further. In addition, endeavours are made to orient research in the field of law towards the requirements of European and global structures, thus further consolidating the Faculty's position in the international competition in legal matters.

The outstanding role of the Faculty in research also benefits its teaching activities, which are mainly research-led in the best sense of the word, to prepare graduates for the professional life of tomorrow and beyond, as well as to contribute to the support of early stage researchers in their career.

Specific importance is given to Third Mission concerns, which are closely linked to the Faculty's research and teaching agenda. Members of the Faculty contribute to the continuous transfer of knowledge to legal practice through publications and talks to professional and non-academic audiences. Faculty members also provide legal insights to the media and interested members of the public and take part in civic debates about legal matters.

4.3.2 Thematic Areas and Key Research Areas

The key research areas of the Faculty of Law of the University of Vienna must be understood in the context of the need to preserve and advance the broad approach to university-based research and teaching outlined above.

The areas in which the Faculty conducts research are partly determined by the law. The legal framework identifies areas on which research is to be focused. Accordingly, basic research and application-oriented research are equally relevant and must be undertaken in close connection with each other.

As a large academic institution, the University of Vienna's Faculty of Law needs to demonstrate comprehensive expertise in both research and teaching.

In its key research areas, the Faculty primarily considers European and international matters. The individual departments are equally geared towards international relevance. Topical questions of a cross-border nature are being increasingly researched in cooperation with foreign, international or EU institutions (such as the European Law Institute).

Besides continuing and deepening its research activities across the entire field of law, the Faculty intends to build or use both interdisciplinary and intradisciplinary networks. It has defined its key research areas as follows.

Health and medical law, bioethics and biotechnology law

The issue of the provision of comprehensive health care is not restricted to Austria, but is relevant to all countries of the European Union. International developments must also be taken into account. Research in this area is thus a particularly good example of international and interdisciplinary cooperation. In addition, due to increased cross-border activity in the health-care sector (for instance, in medical research, in the pharmaceutical market or with regard to organ donors and tissue transplants) a growing number of international and supranational legal regulations have been enacted, which require more detailed analysis.

On the one hand, this key research area covers the traditional areas of health and medical law in an interdisciplinary way (e.g. the organisation of the health-care system, professional rights of health-care staff, hospital law, informed consent, confidentiality and data protection, liability under civil and criminal law, law of pharmaceutical products and medical devices, legal end-of-life questions, rights of the dead,

combatting contagious diseases, and coercive measures in medical and care contexts). On the other hand, it covers the challenges with which the legal system is increasingly often confronted, due to new medical technologies (e.g. reproductive medicine, genetic engineering, stem cell research, tissue engineering and regenerative medicine). These issues need to be investigated and taught appropriately from a legal point of view, with a multidisciplinary approach crossing the traditional boundaries of legal areas. Relevant aspects of legal ethics are also included, with particular regard to the demographic changes in society.

The Faculty's research activities are pursued in cooperation with the Medical University of Vienna, particularly at the Department for Ethics and Law in Medicine, a research platform spanning different faculties, and on the basis of the existing cooperation agreement between the University of Vienna and the Medical University of Vienna on collaboration in the areas of bioethics, medical ethics and medical law.

Codification of private law

Whereas the aim of the major private law codifications of the 19th century was to provide systematic private law legislation in a conclusive code of law, private law in the present day is characterised by pronounced fragmentation. The Austrian Civil Code (ABGB), which continues to be selectively amended, and in part reformed, has been complemented by numerous special acts, particularly in the area of consumer protection law. This evolution arose from the need to adapt private law to changes in the social and economic framework to implement European legislation. Today, private law has become multi-layered with regard to the place, origin and extent of regulation, as well as the time and historical situation in which individual acts of law or regulations were laid down. In view of the complexity of present-day private law, a comprehensive recodification of the entire private law system does not seem to be a realistic option. The challenge is rather to ensure that the provisions of newly adopted acts are consistent with the existing legal framework, to preserve its systematic structure, enable its practical applicability and guarantee legal certainty.

It has been a long-standing tradition of the Faculty of Law at the University of Vienna to provide expert consultancy services to the legislator in order to prepare comprehensive laws, to initiate legal reform, to answer legal questions arising during the elaboration of reform projects, to find practical solutions for implementation and to provide background on comparative law, legal history and European law. This key research area is interdisciplinary and can draw on international networks in the form of numerous contacts

with institutions in other countries, as well as cooperation with the European Law Institute. Recent examples of input in this field include the reform of inheritance law, adult protection law, family law, loan contracts, consumer protection law and tort law.

Europeanisation of commercial law and business law

Legal developments in Europe have brought about a considerable need for adaptation in several main areas of, predominantly commercial, activity: corporate law, capital market law and competition law, intellectual property law, e-commerce law (including the entire field of IT law and laws concerning technology-related intangible rights, taking into account recent technological developments) as well as insolvency and restructuring law.

The Single Market goal of the European Union has led to the continuing harmonisation and unification of commercial law and business law, which creates special challenges for legal academia. This is true, in particular, with regard to the law governing listed companies, technology-affiliated sectors and antitrust law. After an initial wave of seminal decisions, the influence of the fundamental freedoms on corporate law is again taking centre stage.

The examples above illustrate both a continuous increase in the extent of regulation in commercial and business law, and new levels of harmonisation at the level of EU law. This goes hand in hand with a Europeanisation of law as an academic discipline. Today, the discourse here is increasingly dominated by comparative methods and the identification of best practice. In addition, input from law and economics, as well as principles-based regulation have become a focal point. The withdrawal of the United Kingdom from the EU has led to an additional dynamic.

The dynamics of national and international law enforcement and dispute resolution

Globalisation has led to an increasing number of disputes with cross-border and other international elements. As a response, this key research area focuses on the international dimension of litigation, the Europeanisation of procedural law, comparative procedural law, as well as the link between private international law and international civil procedure. Particular importance is given to alternative dispute resolution methods, their historical development and their relevance in the international context.

However, in the changing society of the present, the traditional mechanisms of law enforcement

(through judicial proceedings, judgments and enforcement) have increasingly often turned out to be insufficient – and not only in the international context. On the one hand, conflict resolution by courts is often regarded, whether rightly or wrongly, as an expression of the current political power relations and not sufficiently oriented towards the individual situation of the parties, which may lead to injustice. On the other hand, in all but a few areas of society, judicial decisions have increasingly been deemed unsatisfactory and of limited constructive value with regard to future situations. This is one of the reasons why almost all areas of law have, in addition to traditional instruments of law enforcement, also established new procedures for the resolution of conflicts (alternative dispute resolution, diversion in criminal proceedings and conflict resolution in general).

These developments have had far-reaching effects on civil, administrative and criminal procedure. They have evidenced the need to find new strategies of law enforcement, which will allow reaching legally binding compromise in a way acceptable by society. Analysing the changes of recent years, identifying the risks and opportunities presented by new forms of conflict resolution, and monitoring these developments on a critical academic basis is one of the major challenges that the Faculty of Law will be tackling in the near future.

The historical and philosophical basis of European legal culture

This key research area draws upon fundamental legal subjects (legal philosophy, law of religion and culture, history of law and constitution, Roman law and ancient legal history) and aims to gain further insights into perspectives of future European legal developments. Particular attention is paid to aspects that can be understood as specific features of European legal culture in the context of European integration, which requires enhanced reflection and research on dimensions of legal culture in a wider European context. The instruments to meet this end primarily include comparisons across time (legal history) and space (comparative law) as well as the analysis of modern regulations and institutions. Another tool is the analysis of specific historical conditions and developments in which laws, regulations and institutions are rooted and from which they have evolved. In this way, commonalities in the basic structures of European legal systems can be identified, across all fundamental subjects of law.

The increased importance of the international context and the interaction between EU regulations and national law also pose challenges for legal methodology. The Faculty of Law at the University of Vienna has always attached great importance to methodological questions. This

tradition will be continued – taking into account the new challenges – and further developed through critical assessment.

Law in multicultural and intercultural contexts; law of migration and integration

The increase in international migration and the resulting changes in society involve manifold challenges across the entire legal system. They raise the question as to the instruments the state has at its disposal to control and direct migration in all its forms – ranging from forced migration to labour, family and educational migration – while respecting international law, EU law and fundamental rights. This causes a variety of further problems regarding labour market regulations, migrants' access to the social security system and the educational system, their position in the housing market and their social integration. Finally, it is necessary to analyse the effects of migration on society with increasing pluralism on the one hand and rising cultural and religious conflicts on the other. This key research area studies these issues from the perspective of Austrian law as well as that of comparative law, legal history and legal philosophy.

Anti-discrimination law and legal gender studies

Gender, ethnic origin, religion or worldview, age, sexual orientation and disability are characteristics that require particular attention and sustainable legal protection. Current research activities often focus on the interaction of several discriminatory factors and thus pursue a cross-sectional approach to anti-discrimination law.

However, gender continues to be of special relevance as it is always visible, and has continued to have massive consequences. It is an aspect of power relationships rooted in tradition and socially institutionalised or reinforced in many ways all over the globe. A key task of legal gender studies is to contribute a critical analysis of this dimension of power, focusing on legal questions. This is illustrated by the basic research question of how gender is established in law, for instance, in debates about a 'third option' in addition to 'male' and 'female' in civil status matters.

Further challenges that have to be met include the following: In labour law, non-discrimination principles, positive interventions and provisions on gender-related employment protections are being discussed; in business law, quota regulations for supervisory board members are a topical issue; in criminal law, protection of sexual integrity is of key relevance; and in civil law, the focus is on gender-related aspects of

domestic arrangements – in the context of co-habitation, marriage or a registered partnership. The doctrinal legal perspectives are elaborated and expanded by including aspects of legal history and legal philosophy. They can be useful, for instance, with regard to issues such as the admissibility of quotas in recruiting procedures or in politics, or the legal solutions to conflicts concerning the coexistence of peoples of different religious and cultural backgrounds, which often have strongly diverging views on gender relations.

Fundamental rights and human rights in complex relations of power

In the present day, power is more than state authority – it is also exerted by supranational bodies and powerful private stakeholders at several levels and in overlapping areas; sometimes in a fragmented, sometimes in a coordinated, and sometimes in a mutually competitive way. Regulatory and prohibitive tendencies as well as surveillance on the part of the state have increased, but today it is often argued that the fundamental freedoms of certain groups need to be restricted in order to protect the human rights of others, and the state tends to cooperate with international organisations, supranational bodies and other states in this respect. There are corporations that have reached a position of economic power that enables them to dictate their terms to staff, competitors and states alike. Search engines and social media have gathered enormous quantities of data that represent power in the form of knowledge, to which all of us are willing, though unofficial, contributors. Under these conditions, it is necessary for all legal disciplines to reconsider the issue of protecting fundamental and human rights. This key research area is designed to meet these challenges.

Digital economy – digital law

As human interactions, assets and business transactions increasingly move from the real to the digital world, and as the digital and real worlds converge, responses on the part of the law are required. The legal system must be able to address emerging problems, guarantee legal certainty and a worthwhile life for the citizens in the digital future. Legal challenges that will determine the future concern sharing-economies, smart contracts, 3D printing, data economy, the Internet of Things, artificial intelligence and robotics, social media and personality rights, crowdworking, cybercrime, new requirements for tax law, organisation of knowledge within a corporate entity, antitrust issues, and the completion of the Digital Single Market, which the European Commission has identified as a key priority. Meeting these challenges requires a fundamental examination of both present and

future laws, taking into account European and international developments. In addition, digitalisation has effects on the structure of the law and the form in which it appears, which again influences the terms of legal discourse. All these aspects need to be researched, encompassing different subjects in an interdisciplinary way.

4.3.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Ancient Legal History and Roman Law
- Austrian and European Legal History
- Austrian and European Legal History
- Austrian and German Legal History
- Business Law
- Civil Law

- Civil Law
- Civil Law
- Civil Law
- Civil Law
- Civil Law
- Civil Procedure
- Civil Procedure
- Commercial Law with Special Emphasis on Links with General Civil Law
- Company Law and Capital Markets Law with Special Emphasis on its Europeanisation
- Comparative Private Law and Private International Law
- Constitutional Law and Administrative Law
- Constitutional Law and Administrative Law
- Criminal Law and Law of Criminal Procedure
- Criminal Law and Law of Criminal Procedure
- Criminal Law and Law of Criminal Procedure
- Criminal Law, Law of Criminal Procedure and Criminology
- Criminology and Criminalistics
- European and International Civil Procedure
- European Law
- Financial Law
- Globalisation and Legal Pluralism
- History of Law
- International Business Law
- International Law
- International Law



- International Law
- International Law
- International Tax Law
- Labour Law and Law of Social Security
- Labour Law and Law of Social Security
- Labour Law, Law of Social Security and European Business Law
- Law of State and Constitution and Administrative Law
- Law of State and Constitution and Administrative Law
- Legal Philosophy and Legal Gender Studies
- Legal Philosophy and Methodology of Legal Studies
- Medical Law
- Private Law, Private International and Comparative Law
- Public Law
- Public Law with Special Emphasis on Economic Administrative Law
- Roman Law (with Special Emphasis on Comparison of the Development of Private Law)
- Technology Law and Intellectual Property Law

4.3.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Financial Law
- Innovation and Private Law
- Innovation and Public Law
- Legal Ethics and Legal Philosophy
- Roman Foundations of European Private Laws

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:
Civil Procedure

Time of appointment:
following vacancy of the Professorship of Civil Procedure (presumably as of 1 October 2022)

Subject dedication of professorship:
Austrian and European Private Law

Time of appointment:
following vacancy of the Professorship of Civil Law (presumably as of 1 October 2022)

Subject dedication of professorship:
Public Law in the European Context

Time of appointment:
following vacancy of the Professorship of Constitutional Law and Administrative Law (presumably as of 1 October 2023)

Subject dedication of professorship:
Constitutional Law

Time of appointment:
following vacancy of the Professorship of Public Law with Special Emphasis on Economic Administrative Law (not before 1 October 2023)

Subject dedication of professorship:
Austrian and European Private Law

Time of appointment:
following vacancy of the Professorship of Civil Law (presumably as of 1 October 2024)

Subject dedication of professorship:
Administrative Law

Time of appointment:
following vacancy of the Professorship of Law of State and Constitution and Administrative Law (presumably as of 1 October 2024)

Subject dedication of professorship:
Labour Law and Social Security Law

Time of appointment:
following vacancy of the Professorship of Labour Law and Law of Social Security (presumably as of 1 October 2025)

Subject dedication of professorship:
Private Law, Private International Law and Comparative Law

Time of appointment:
following vacancy of the Professorship of Comparative Private Law and Private International Law (presumably as of 1 October 2026)

Subject dedication of professorship:
Public Law and Comparative Law

Time of appointment:
following vacancy of the Professorship of Public Law (presumably as of 1 October 2026)

Future professorships subject to availability of funds

Subject dedication of professorship:
European Law

Subject dedication of professorship:
Fundamental Rights and Human Rights

It is intended that third parties
(at present: Ludwig Boltzmann Gesellschaft)
co-finance 50 %.

Subject dedication of professorship:
Law and Economics

(joint appointment with the Faculty of Business, Economic and Statistics)

4.4 Faculty of Business, Economics and Statistics

4.4.1 Objectives

The goals of the Faculty of Business, Economics and Statistics, in addition to accomplishing top achievements in research and teaching, also include the communication of knowledge to society.

Research at the Faculty comprises a wide range of themes in the areas of business administration, economics, statistics, finance, economic sociology and business law. It is based on the conviction that a productive exchange between theoretical and empirical approaches will bring about new insights. On the one hand, theory has to be systematically tested against reality, while, on the other, the results of empirical validation have to be integrated into the generation of theories. This orientation towards quantitative and analytical aspects is a key characteristic of the Faculty, which has met with positive feedback in the international academic community. This focus is also supported by cross-sectional areas, which are designed to establish methodological links between the traditional areas, particularly experimental economics, data science and operations research.

Teaching at the Faculty is research-oriented at all levels. It is aimed at encouraging students to first understand, and critically reflect on, the current state of the art so as to enable them to take the next step, i.e. apply findings in practice and to conduct their own research. The knowledge and mastery of academic methods influences one's thinking and is highly appreciated in various professional fields. Teaching thus also equips experts in private business, administration and non-governmental organisations with good methodological tools.

The Faculty welcomes the cooperation with external partners with an affinity for academia, and strives to maintain and intensify its traditional close links with the Institute for Advanced Studies.

4.4.2 Key Research Areas

The Faculty has defined five key research areas, which are aimed at overcoming the confines of a disciplinary perspective and at combining the ideas and projects of different subjects.

Human behaviour and the economy

This key research area focuses on human behaviour in economic decision-making. While models of business administration and economics have to be based on assumptions about human behaviour to enable forecasts, the task of experimental economics is to test these assumptions and models. Such a combination of theoretical and experimental approaches permits a realistic modelling of human decision-making behaviour. Today, the results of this research provide the basis for application in almost all disciplines at the Faculty: They range from analyses of economic and regulation policies to behavioural finance and questions of business administration in, for instance, the areas of marketing, strategy, organisation and personnel, as well as economic sociology.

Changing markets and institutions

Transaction cost – i.e. the cost incurred in the exchange of goods and services in economic systems – is no less important than the cost incurred in the production of these goods and services. The efficient coordination of transactions in markets and enterprises through institutional design continues to be a challenge for both governments and enterprises in the context of a global competition that is becoming increasingly intensive. The digitalisation of economic processes has changed both the scale (big data) and the substance of economic transactions. Economic analyses and applications study the effects on the efficiency of imperfect competition and its control by governance structures with regard to property rights, and by contractual incentive systems.

Corporate strategies and processes

In modern enterprises, the traditional separation of strategy development into market and environmental analysis on the one hand, and organisational development with regard to the design of internal corporate processes on the other, is about to disappear. It is being replaced by strategic management – a process in itself – which coordinates corporate organisation and value-added activities and orients them towards internationalisation and environmental conditions that are changing increasingly fast. In addition to strategic management as such, this is particularly relevant for technology and innovation management, as well as for supply chain and operations management and – due

to the further advancement of digitalisation and availability of big data – also for the field of business analytics. However, input obviously comes from all other disciplines of business administration and several disciplines of economics as well, for instance industrial organisation, labour market economics and from interdisciplinary approaches such as cooperative business and sharing economy.

Management of resources

Resources – natural, human, financial and informational resources – are the basic building blocks of any economic activity. Growth and development depend on the availability or scarcity of resources. Their asymmetric distribution and the possibility of their privatisation by economic actors bring about strategic behaviour. The management of resources aims at the efficient use of resources in economic systems, at both the social and corporate levels. Economic analyses and academic papers study the growth and development of regions, sustainable environmental and energy policies and management, production and logistics in the value chain, the design of education and training systems, as well as efficient information systems and their management.

Data science and analytics

At a time where big data are available from almost all areas of society, and have become increasingly complex (high-dimensional data), it is more urgent and more important than ever

to develop appropriate statistical methods and algorithms as well as the corresponding optimisation procedures. There is an observably high demand for specialists with academic training in data science and analytics on the national and international labour markets. This leads to challenges with regard to both application and up-to-date methodological developments in statistics (analysis of high-dimensional and heterogeneous data, modelling, model selection and inference), operations research (optimisation and modelling), as well as quantitative computational economics (business analytics, finance and applied econometrics). Their application plays a special role in the analysis of currency, securities and energy markets, banks and insurance funds, as well as other financial institutions, corporate finance, and also in logistics and operations management.

4.4.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. For information purposes, the research areas that are currently covered are provided in square brackets. The names outside the square brackets give the official designations. The list below shows the situation at a certain point in time and does not predetermine any future subject



dedication of professorships, nor the ones dealt with in the following section.

- Applied Mathematics and Statistics
- Applied Statistics
- Behavioural Economics with Applications in Austrian Economic Policy
- Business Administration – Finance [Corporate Finance]
- Business Administration – International Business
- Business Administration – Personnel Management [International Personnel Management]
- Business Administration – Production and Logistics with International Focus
- Business Administration – Service Management/Financial Services
- Business Administration [Controlling]
- Business Administration [Organisation and Planning]
- Business Administration [Production and Operations Management]
- Business Administration [Strategic Management]
- Business Analytics
- Civil Law with Special Emphasis on Business Law [Civil Law and Business Law]
- Development Economics [Economics – Development Economics]
- Economic Sociology
- Economics – Applied Economics in the Area of Macroeconomics (Applied Macroeconomics) [Economics – Applied Macroeconomics]
- Economics – Applied Economics in the Area of Microeconomics (Applied Microeconomics) [Economics – Applied Microeconomics]
- Economics – Economic Policy
- Economics – Public Finance
- Economics (Industrial Organisation, International Economics)
- Economics [Economics – Empirical Macroeconomics]
- Economics [Economics – Macroeconomic Theory]
- Economics with a Microeconomic Orientation [Economics – Microeconomic Theory]
- Finance [Business Administration – Financial Markets]
- Finance and Mathematics
- Financial Law with Special Emphasis on International Business Tax Law
- Marketing, Business Administration [International Marketing]
- Microeconomic Theory; Methods and Application to Specific Problems (e.g. Auctions, Foreign Trade, Governance, Regulation, Labour Market) [Economics – Microeconomic Methods and Applications]
- Quantitative Risk Management
- Statistics
- Statistics and Stochastic Optimisation

- Statistics with Applications, in particular in Business Administration and Economics

4.4.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Business Administration – Marketing
- Business Administration – Technology and Innovation Management

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Macroeconomics

Time of appointment:

following vacancy of the Professorship of Economics II (presumably as of 1 October 2022)

Subject dedication of professorship:

Financial Accounting

Time of appointment:

following vacancy of the temporary Professorship of Business Administration – Financial Accounting (presumably as of 1 October 2023)

Subject dedication of professorship:

Marketing

Time of appointment:

following vacancy of the Professorship of Marketing, Business Administration XIV (presumably as of 1 October 2023)

Subject dedication of professorship:

Optimisation

Time of appointment:

following vacancy of the Professorship of Applied Mathematics and Statistics (presumably as of 1 October 2023)

Subject dedication of professorship:

Organisation

Time of appointment:

following vacancy of the Professorship of Business Administration XI (presumably as of 1 October 2024)

Subject dedication of professorship:

Production and Logistics

Time of appointment:

following vacancy of the Professorship of Business Administration XII (presumably as of 1 October 2024)

Subject dedication of professorship:
Statistics
Time of appointment:
following vacancy of the Professorship of
Statistics I (presumably as of 1 October 2024)

Subject dedication of professorship:
Law and Economics
(joint appointment with the Faculty of Law)

Subject dedication of professorship:
Private and Corporate Law
(cooperation with the Faculty of Law with
regard to advertising and recruitment)
Time of appointment:
following vacancy of the Professorship of
Civil Law with Special Emphasis on Business
Law [Civil Law and Business Law]
(presumably as of 1 October 2025)

Subject dedication of professorship:
Macroeconomics
Time of appointment:
following vacancy of the Professorship of
Economics (presumably as of 1 October 2026)

Subject dedication of professorship:
Finance
Time of appointment:
following vacancy of the Professorship of
Finance (presumably as of 1 July 2027)

Subject dedication of professorship:
Microeconomics
Time of appointment:
following vacancy of the Professorship of
Microeconomic Theory; Methods and
Application to Specific Problems
(e.g. Auctions, Foreign Trade, Governance,
Regulation, Labour Market)
[Economics – Microeconomic Methods and
Applications]
(presumably as of 1 October 2027)

Subject dedication of professorship:
Microeconomics
Time of appointment:
following vacancy of the Professorship of
Economics with a Microeconomic Orientation
[Economics – Microeconomic Theory]
(presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship:
Service Management

Subject dedication of professorship:
Operations Research

Subject dedication of professorship:
Applied Econometrics

Subject dedication of professorship:
Accounting

4.5 Faculty of Computer Science

4.5.1 Objectives

Today, the topics and methods of computer science have influenced virtually all other academic fields. The applications of computer science methods also have manifold effects on society and all spheres of life. Computer science has thus developed from a discipline mainly oriented towards technical engineering to a discipline with broad impact on and strong connections with a wide range of other disciplines, including social sciences, the humanities and human science. The Faculty of Computer Science at the University of Vienna thus covers a great variety of subjects in the key areas of both computer science and its fields of application. One of its goals is to strengthen the disciplinary core of the Faculty as a basis for the further development of interdisciplinary links and for enabling its research and teaching to provide valuable input to current and future challenges. This would not be possible without taking into account the wide range of subjects at the University of Vienna. By interacting and establishing networks with many different disciplines, the Faculty of Computer Science has been able to develop a unique profile. Interdisciplinary links exist in the following fields:

- in data science and scientific computing, with mathematics, astronomy, chemistry, biology as well as business, economics and statistics;
- in bioinformatics, with mathematics, chemistry and biology;
- in computational science, with pharmacology, pharmacoinformatics, mathematics, chemistry, biology, physics, astronomy and earth sciences;
- in business informatics, with business, economics and statistics;
- to the Faculty of Philological and Cultural Studies;
- in didactics of computer science to the Centre for Teacher Education;
- to psychology;
- to law.

These links are being continually expanded. In addition, links will be built and expanded with

- neuroscience and cognitive science,
- the Faculty of Social Sciences,
- the Faculty of Philosophy and Education,
- the Medical University of Vienna.

The research activities of the Faculty include national and international cooperation with other universities and research institutions. There is a balance between basic research and applied re-

search. Technology transfer activities contribute to a sustainable research environment.

4.5.2 Thematic Areas and Key Research Areas

In its strategic orientation, academic research at the Faculty of Computer Science is focused on the following three thematic areas, which have become core areas of great relevance: theory and computing, data and knowledge, and models and systems.

Theory and computing: The principles, methods and technologies of computer science are advanced and applied in conjunction with those of information and communications technology (ICT) to resolve problems in other academic disciplines.

Data and knowledge: This thematic area comprises all structures and processes of computer science that make it possible to collect, organise, process, analyse and present data and knowledge in all their shapes and forms and also permit the development of new knowledge through processes of learning and cooperation.

Models and systems: In computer science, the term 'system' refers to the integrated interconnection of objects or processes that depend on, interact or interlink with one another. Models are abstractions of the systems studied in computer science. They are of key relevance for understanding those systems, for their development and design, and for their analysis and optimisation.

At the Faculty, a wide range of research activities are pursued in these three thematic areas. The four key research areas described below have developed a particularly strong profile (for instance, through the acquisition of third-party funds for basic research and applied research).

In addition to the subject-specific thematic areas and key research areas, the Faculty of Computer Science and the Centre for Teacher Education also represent the research area of computer science education (didactics of computer science), with a research focus on the discipline of computer science in educational contexts.

Graphs and networks

The key research area of graphs and networks examines questions of networks which can often be modelled as graphs. These networks comprise communication networks that constitute the backbone of digital society, as well as many other types of networks such as social networks. For using and communicating through such networks, new algorithms are needed that meet



high efficiency and scalability requirements: At present, networks are growing rapidly in many areas, which goes hand in hand with higher energy consumption. For instance, due to the popularity of data-centred applications (in the areas of health, business, social networking, etc.), particularly data traffic to and from data centres has seen an enormous increase, so that wide-area networks could soon reach their capacity limits. According to forecasts in several studies, data centres could, by 2025, account for approximately 5 % of worldwide energy consumption. Energy efficiency and sustainability are thus a key aspect of research.

Many issues concerning such large networks require solutions to algorithmic problems on the basis of graphs. Efficient graph algorithms are being developed, analysed theoretically and also assessed empirically. The research activities in this area also include dynamic, distributed and parallel algorithms. Examples of the application of these algorithms include new communication technologies such as software-defined networks, programmable data planes, reconfigurable optical networks or self-*networks that optimise and repair themselves autonomously, which enhances their efficiency, safety and reliability.

Further research activities closely related to this field, with important links to the key research area of data science at the Faculty, focus on algorithms aimed at understanding neural networks, as well as algorithms for the generation of knowledge from social networks. Graph-based abstractions also serve as the basis for algorithms and for programming future computer

architectures, which are massively parallel on the one hand, but, for reasons of energy efficiency, also increasingly heterogeneous on the other hand. In task-based runtime systems, complex scalable and adaptive algorithms that are used as a basis for computationally intensive and data-intensive applications can be represented as dynamic graphs; they play a key role for developing a new generation of parallel programming models. In addition, networks are of great relevance for cloud data centres and supercomputers, which nowadays contain millions of processors within one system.

Data science

Data science focuses on acquiring knowledge from data. Due to the digital transformation, by now almost all academic areas need data science methods, and data-driven research is essential in numerous academic fields: For instance, in medicine and the life sciences, pharmacy, chemistry and astrophysics, as well as in the humanities and social sciences, new knowledge is increasingly based on data science methods. At the same time, questions from other academic areas have inspired the development of new data science methods. In its broadest interpretation, data science is an interdisciplinary research field and requires close cooperation between those developing new methods and those applying them. The University of Vienna is conducting interdisciplinary research in this area. The Faculty of Computer Science pursues research in central methodological components of data science, and plays a leading role in the relevant interdisciplinary activities, where it contributes its expertise in computer science. It is es-

pecially due to its inherent bridging function that data science is among the key research areas at the Faculty of Computer Science.

Since datasets are growing continuously and very rapidly, the use of computer science methods to generate knowledge from data is an indispensable cornerstone of data science research. The research topics in this field encompass the entire process of knowledge generation from data: database techniques for efficient storage, representation and organisation of very large data and for similarity search; data mining methods for detecting trends and patterns; machine learning methods for forecasting correlations (here, interpretable machine learning and robust machine learning are of particular interest); visualisation methods for understanding data and models. In this area, links with the algorithmic methodological components of computational science exist, where traditional ab-initio models are meanwhile being increasingly supplemented by data-driven models, so that the use of machine learning methods has also become very important.

Data science is an emerging research area, since increasing amounts of data have been acquired and collected in almost all areas of knowledge, and computing infrastructure has seen a rapid advancement over the past few decades. However, the constant further development and diversity of the computing infrastructure also requires a permanent advancement of algorithms and runtime systems, as well as of tools and libraries in order to meet the ambitious goals that have been set in data science. Here, relevant components also come from other research activities at the Faculty of Computer Science – for instance, in the areas of robustness and scalability of numerical algorithms, methods for analysing neuronal data, text mining, and software and middleware.

Intelligent, distributed and secure systems

This key research area is based on the observation that the real and the digital worlds will converge further in the future. In this context, the focus is primarily on intelligent systems that are needed in this process of transformation.

The challenge here is to explore and develop methods and processes concerning knowledge in intelligent systems, as well as knowledge on intelligent systems, taking new approaches into account.

This results in research questions such as: How can systems be developed and modelled in line with a design-oriented approach in order to enable new architectures in a disruptive environment (sustainability)? How can domain-spe-

cific knowledge be formalised, and how can a representation thus become machine-understandable (operationalisable, intelligent)? How can the behaviour of these intelligent systems be designed in a comprehensible way (explainability)? How can security and privacy be ensured in this context (secure systems)? How can we meet the challenge of the constantly increasing distribution of information systems (distributed systems)?

The complexity and diversity of digitalisation is addressed, on the one hand, by establishing the corresponding research approaches, and on the other hand, by design-oriented approaches that also take disruptive technologies into account. The above research questions are of key relevance to the core of computer science, and they are an essential component of modern systems-oriented and design-oriented business informatics at the Faculty of Computer Science.

This key research area comprises research on, and the development of, approaches, methods and tools for the areas of cloud computing, flexible and distributed processes, parallel computing, conceptual modelling, intelligent and agile agents, DevOps, semantic technologies, the Internet of the future, service-oriented systems, cooperative systems, IT infrastructure for Industry 4.0, cyber-physical systems (CPS), the Internet of Things, as well as blockchain systems.

The semantics of a specific application domain are particularly relevant for being able to use new technologies adequately. Conceptual modelling serves as a basis in this context. Different fundamental technologies and new technologies under development are combined to illustrate and prove feasibility and approaches to solutions in the context of prototype systems.

In design-oriented research, prototype implementations are planned, realised and validated by using emergent technologies. Specific use cases enable an evaluation in an experimental environment of the models that have been developed. It is thus also possible to grasp the symbiosis of the virtual and the real worlds that has been brought about by digitalisation.

Human-centred computing

The key research area of human-centred computing puts special emphasis on human beings and their diverse needs and aspirations. It includes both the theoretical and the experimental development of human-computer systems, interfaces, models and interaction processes. Human-centred computing is an inherently interdisciplinary area that lies between computer science and psychology, human science, neuroscience, social science, business and economics, law, political science, translation and communi-

cation, philosophy of technology, ethics, art, etc. This key research area focuses on the computer science aspects and the resulting links to the above disciplines.

At the centre of research activities lies the vision that human-centred computing can contribute to improving quality of life, social inclusion, effectiveness, as well as personal fulfilment and purpose at the individual and the social levels, and to reducing the digital gap. Members of the Faculty study the human-centred design of human-computer interfaces, assistive communication devices, brain-computer interfaces, technologies and systems for inclusion and empowerment of people with special needs, the improvement of user experience to increase the acceptance of applications, and questions of the values-based use and sustainable advancement of ICT.

In addition to the focus on designing interfaces between human beings and computers, the Faculty is engaged in several initiatives, including interdisciplinary initiatives, to examine technologies that aim to assist human beings in regard to learning, decision-making, working and improving their quality of life in the context of digital change. This takes place, for instance, by means of empirical studies of factors influencing the use of information technologies, by expanding and improving human learning processes through digitally supported access, by means of comprehensible explanations and visualisations of AI models, as well as by means of digital technologies supporting communication and cooperation.

At the Faculty of Computer Science, important links have been established between the key research areas of human-centred computing and data science with regard to technology-enhanced learning and data visualisations that are easy to grasp for human beings. The key research areas intelligent, distributed and secure systems and human-centred computing are inherently linked through the research approach of design thinking, aimed at developing human-centred systems and interfaces. In addition, security and the protection of privacy are further essential characteristics of human-centred computing, and thus closely linked to the security concerns of the key research area intelligent, distributed and secure systems. Another important connection exists with the research activities in computer science education (didactics of computer science), particularly regarding physical computing, gaming education and technology-enhanced learning.

4.5.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- (Scientific) Visualisation
- Applied Computer Science
- Applied Computer Science (joint appointment with the Centre for Teacher Education)
- Biochemical Modelling (joint appointment with the Faculty of Chemistry)
- Bioinformatics (20 %; 80 % at the Max Perutz Labs)
- Business Informatics
- Business Informatics
- Communication Technologies
- Computational Science – Algorithmics and Information and Communication Technology
- Computational Technologies and Applications
- Computer Science
- Computer Science (Cooperative Systems)
- Computer Science (Workflow Systems)
- Data Mining
- Didactics of Computer Science (joint appointment with the Centre for Teacher Education)
- Digital Philology (joint appointment with the Faculty of Philological and Cultural Studies)
- Neuroinformatics
- Scientific Computing – Parallel and Distributed Systems
- Security and Privacy
- Software Architectures

4.5.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Computational Medicine (joint appointment with the Medical University of Vienna, Faculty of Computer Science or Faculty of Mathematics depending on the advertising result)

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship: **Computer Science (Process-Oriented Information Systems)**

Time of appointment:

following vacancy of the Professorship of Computer Science (Workflow Systems) (presumably as of 1 February 2021)

Subject dedication of professorship: **Business Informatics – Intelligent Information Systems**

Time of appointment:

following vacancy of the Professorship of Business Informatics II (presumably as of 1 October 2024)

Subject dedication of professorship: **Programming Languages**

Time of appointment:

following vacancy of the Professorship of Computer Science (presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship: **Theoretical Computer Science**

Subject dedication of professorship: **Database Systems**

Subject dedication of professorship: **Human-Computer Interaction**

Subject dedication of professorship: **Distributed Systems**

4.6 Faculty of Historical and Cultural Studies

4.6.1 Objectives

The Faculty of Historical and Cultural Studies investigates politics, economy, society and culture in their historical dimensions and in this way critically reflects on and analyses remembrance cultures of individuals and societies. This forms the basis for a more sophisticated understanding of the past and the present, as well as for action in both social and individual contexts, which can contribute to future developments in a responsible way. The Faculty makes its work available to the public, and thus brings expertise (fundamental knowledge and orientation) into society, in the sense of comprehensive education: This takes place through schools, museums (e.g. in the context of exhibitions), libraries, archives, monument preservation, other cultural institutions, as well as media (printed media, web and new social media, radio, TV and films), whose staff has also been educated at the Faculty. Cooperation in this context includes an exchange between subject-specific academic knowledge and subject didactics on the one hand, and cooperation with the Centre for Teacher Education and the Faculty of Philosophy and Education with regard to the education of teachers on the other, in addition to cooperation with public institutions such as museums and the Austrian Academy of Sciences. In a research arena with an increasingly interdisciplinary and transdisciplinary orientation, cooperation across different disciplines within the Faculty has also become more and more important. In order to further such cooperation projects, a Faculty Centre for Transdisciplinary Historical-Cultural Studies has been established. The Faculty plans to further pursue this path. Furthermore, intensive inter-faculty cooperation links have been established in research and teaching – for instance, with the Faculty of Philological and Cultural Studies, the Faculty of Philosophy and Education and the Faculty of Social Sciences.

The Faculty of Historical and Cultural Studies is among the largest and most diverse of its type, much as one would expect of a large university in a capital city. Its research and teaching covers all periods of human history, and geographically, its activities extend to Europe, the Mediterranean region, Asia – and, in the context of global history, even beyond. In sum, the Faculty's unique profile corresponds to the position of the University of Vienna in the Danube region – with its special place in the past, present and future of Europe and the world – and takes into consideration current approaches in historical cultural studies. These seek to view the world as a complex whole, which cannot be understood by reference to European culture and history

alone, and without the reflection on Europe's particular role within the global context. The Faculty also regards it as its commitment to make the resulting research results available for social advancement and thus to communicate them beyond the academic community.

4.6.2 Thematic Areas and Key Research Areas

The Faculty of Historical and Cultural Studies combines a great variety of disciplines and offers a wide range of subjects for study and paths to knowledge: Texts, material relics and visual media from all periods, as well as audio(-visual) sources, media and ethnographic and media-based sources from the past and the present time form the basis for the research into actions and ideas with regard to the processes of history.

Spaces from a historical and cultural perspective

The underlying concept of space is highly complex. Spaces are seen as interrelated and as interacting in a historical and dynamic sense, and subject to continuous negotiation and redefinition. The focus is on Austria's position within the geopolitical context of the former Habsburg monarchy and its successor states, as well as the history of Europe in its geographical, political, economic and socio-cultural transformations. The Mediterranean region is of special importance, not least due to the resources for research that are available in Vienna also outside the University, and in view of traditional links with Mediterranean regions. Embracing a global perspective is a necessity for a modern university in a 21st-century capital city. In this context, the key research area of global history can – based on numerous projects in regional cultural studies and area studies – build on historical ties, for instance with a focus on Asia, and open up new international and transdisciplinary perspectives. In the analysis of social spaces, this approach is reflected in the key research areas of Austria and its transnational setting; cultures of the Euro-Mediterranean region and antiquity studies; and historical and cultural European studies. Related research and, thus, cooperation are important for numerous area studies, e.g. at the Faculty of Philological and Cultural Studies, as are its thematic areas of cultures and identities in Europe, cultures and identities outside Europe, and the key research area of cultural and socio-cultural transformations in Asia and Africa.

Society from a historical and cultural perspective

This thematic area investigates the social production and construction of realities, with four key research areas: The well-established research areas of community, conflict, integration; dictatorships, violence, genocide; economy and society from the perspective of historical and cultural studies; and women's and gender history, will be augmented by the additional topic of democracy and human rights. The key research areas focus on the origin and the change of collective identities: They are primarily treated as constructions that have been, and still are, continuously created as religious, political, socio-cultural collective structures. A further focus is the study of the rise and the establishment of violent regimes, as well as the continuing effects that the experience of war and mass murder have had on society even after the end of the regime and the subsequent post-dictatorship processes of change and coming to terms with the past. Specific attention is paid to the 20th century as the 'epoch of violence'. In addition, the history of democracy and human rights is studied as a new topic, which also provides a historical basis for present-day social and political debates. In the key research area of economy and society from the perspective of historical and cultural studies, phenomena of economy and society are studied, particularly as socio-cultural and economic systems, structures and processes, at the macro, meso and micro levels. With regard to the cultural perspective, the focus is on symbolisms and relationships; on attributions from one's own perspective and from the perspective of others, in collective, individual, discursive and practical everyday contexts; on the human being as an 'animal symbolicum' that continues to construct itself autobiographically, and that defines sense and meaning for itself and its social environment, by practices and artefacts (e.g. in handicrafts, industry, art and popular culture). The key research area of women's and gender history examines the concept of women and gender, which, rather than being a universal biological and socio-cultural category, is a construct whose definition – and social operationalisation – may markedly differ, depending on time and place. Specific relevance is attached to self-perception, remembrance and making gender visible as a performative practice of social order. Cooperation links, for instance with the key research area of gender and transformation at the Faculty of Social Sciences, contribute considerably to this thematic area.

Knowledge from a historical and cultural perspective

The emergence and transformation of knowledge societies and knowledge cultures is a central aspect of historicising approaches. The history of science, studied from the angle of general history, is one of the fields of expertise that characterise the Faculty. Knowledge is understood as a paradigm in political, social and cultural constellations. Different forms of knowledge (such as informal knowledge, tacit knowledge or formal knowledge) and their social status as well as cultural meaning are examined in this context. This thematic area, which comprises two large fields, studies where and how knowledge is formed by whom, where and in what respect it has become a resource of social impact or not, how it is used and what forms of knowledge are given priority by whom. The areas of history of science – knowledge cultures – knowledge societies, and digital humanities, including digital heritage, analyse different dimensions of references and relevance of knowledge. In this way, it is possible to track the generation of knowledge, its stabilisation and definition as a process of development from uncertain to academic knowledge, to analyse

different forms of knowledge and to reflect upon, and prepare, the transfer of knowledge, including in the newest media. The key research area of digital humanities examines new methods and interpretation strategies of cultural and historical studies, in cooperation with other faculties and the Austrian Academy of Sciences as well as the Ludwig Boltzmann Gesellschaft. Cooperation also exists with the key research areas of theories of knowledge, of science and of the social world (Faculty of Philosophy and Education) and knowledge societies in turbulent times: science, materialities and public spaces (Faculty of Social Sciences).

Media from a historical and cultural perspective

One of the genuine tasks of the Faculty is to study media as means of transmission, of communication, and mediation of expressions and phenomena of cultural history. The types and origins of sources are indeed diverse – some of them (still) remain in the landscape or under the soil, others are preserved in the Faculty's collections or in museums, in archives and libraries, or they are generated by means of interview research or participant observation. The



valorisation and interpretation of these sources requires special theories and methods that need to be determined in an interdisciplinary dialogue. Media history and media criticism constitute an essential basis for any research in the fields of cultural studies and/or history. These phenomena of cultural history can, and must, be integrated into the discourse on history. They convey diverse meaning and, when viewed against the background of history, can be understood in their complexity. In the present day, the cultural history of communication, illustrated also through its material evidence, is a subject of immediate relevance. This thematic area is explored particularly within the key research areas of material culture; and visual cultural history: cultures and media of the visual; and also in the area of text and edition – editorial studies. In this respect, the key research areas of history of visual culture: cultures and media of the visual, with a historical focus, and the area of visual studies in the social sciences at the Faculty of Social Sciences, with the focus on photography and film, complement each other.

4.6.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Ancient Cultural History; section 99a of the Universities Act (temporary: for six years)
- Ancient History and Papyrology
- Asian Art History
- Austrian History
- Austrian History – History of the Habsburg Monarchy since the 16th Century
- Austrian History of the 19th and 20th Centuries
- Byzantine Art History
- Byzantine Studies
- Byzantine Studies – Ancillary Disciplines for Byzantine and Modern Greek Studies
- Classical Archaeology
- Classical Archaeology
- Contemporary History
- Contemporary History
- Contemporary History – Dictatorships – Violence – Genocides
- Contemporary History: Cultural History, History of Knowledge and Gender History
- Didactics of History (joint appointment with the Centre for Teacher Education)
- Digital Humanities
- Early Modern Art History (with Focus on Baroque)
- Early Modern History
- Economic and Social History
- Economic and Social History with a Focus on the History of the World Economy in the 19th and 20th Centuries
- Egyptology (with a Focus on Archaeology)
- Etruscology and Studies in Italic Classical Antiquity
- European Ethnology
- Everyday Cultures in their Historical Dimensioning
- Greek History, Antiquity Studies and Epigraphics
- Historical Ancillary Disciplines with a Focus on the Middle Ages
- Historical Transregional Studies
- History and Theory of Media Cultures (18th to 20th Centuries)
- History of East Central Europe/ 'Nation-Building'
- History of Eastern and South-Eastern Europe
- History of South-Eastern Europe
- History of the High and Late Middle Ages
- Islamic Art History
- Jewish History, Religion and Literature in Rabbinic Times (70–1000 AD)
- Jewish Studies
- Jewish Studies
- Late Antique and Early Christian Archaeology
- Medieval and Early Modern Art History
- Medieval Art History
- Medieval History and Ancillary Disciplines
- Modern Art History
- Modern Economic and Social History
- Modern Greek Studies
- Modern History
- Modern History – Women's and Gender History
- Modern History with a Focus on the Early Modern Period
- Modern History: History of Science
- Numismatics and the History of Money
- Prehistoric and Protohistoric Archaeology
- Prehistoric and Protohistoric Archaeology, and Landscape and Environmental Archaeology
- Roman History, Antiquity Studies and Epigraphics
- Russian History
- Societies and Cultures of Memory in Eastern Europe

4.6.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Cultural Heritage
- Global Economic and Social History
- Human Prehistory
- Public History

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:
Economic and Social History of the Late Middle Ages and the Early Modern Period

Time of appointment:

funding via a vacant professorship at the Faculty (presumably as of 2020)

Subject dedication of professorship:
Human Prehistory with a Focus on the Metal Ages (Bronze Age/Iron Age)

Time of appointment:

following vacancy of the Professorship of Human Prehistory (presumably as of 1 October 2020)

Subject dedication of professorship:
Modern History – Historical Study of Europe

Time of appointment:

following vacancy of the Professorship of Modern History II (presumably as of 1 October 2021)

Subject dedication of professorship:
History of Europe in the Early Middle Ages

Time of appointment:

following vacancy of the Professorship of Medieval History and Ancillary Disciplines (presumably as of 1 February 2022)

Subject dedication of professorship:
**Contemporary History:
Austrian Contemporary History since 1918 in an International Context**

Time of appointment:

following vacancy of the Professorship of Contemporary History (presumably as of 1 October 2022)

Subject dedication of professorship:
Austrian History: History of the Habsburg Monarchy since the 16th Century

Time of appointment:

following vacancy of the Professorship of Austrian History – History of the Habsburg Monarchy since the 16th Century (presumably as of 1 October 2022)

Subject dedication of professorship:
Medieval Art History

Time of appointment:

following vacancy of the Professorship of Medieval Art History (presumably as of 1 October 2022)

Subject dedication of professorship:
Byzantine Art History

Time of appointment:

following vacancy of the Professorship of Byzantine Art History (presumably as of 1 October 2022)

Subject dedication of professorship:
Numismatics and the History of Money (with a Focus on the Ancient World)

Time of appointment:

following vacancy of the Professorship of Numismatics and the History of Money (presumably as of 1 October 2023)

Subject dedication of professorship:
Social and Cultural History of the 19th and 20th Centuries

Time of appointment:

funding via vacant academic positions at the Faculty (presumably as of 1 October 2023)

Subject dedication of professorship:
Modern History – Women's and Gender History from the Late 18th Century onwards

Time of appointment:

following vacancy of the Professorship of Modern History – Women's and Gender History (presumably as of 1 October 2024)

Subject dedication of professorship:
Historical Archaeology with a Focus on the Late Middle Ages, the Early Modern and Modern Periods and Contemporary History

Time of appointment:

following vacancy of the Professorship of Prehistoric and Protohistoric Archaeology (presumably as of 1 October 2024)

Subject dedication of professorship:
Historical Ancillary Disciplines (including Digital Methods) with a Focus on the Middle Ages

Time of appointment:

following vacancy of the Professorship of Historical Ancillary Disciplines with a Focus on the Middle Ages (presumably as of 1 October 2025)

Subject dedication of professorship:
Jewish Studies with a Focus on Source History and Cultural History

Time of appointment:

following vacancy of the Professorship of Jewish History, Religion and Literature in Rabbinic Times (70–1000 AD) (presumably as of 1 October 2025)



Subject dedication of professorship:

Roman Archaeology

Time of appointment:

following vacancy of the Professorship of Classical Archaeology (presumably as of 1 October 2025)

Subject dedication of professorship:

History of the High and Late Middle Ages

Time of appointment:

following vacancy of the Professorship of History of the High and Late Middle Ages (presumably as of 1 October 2026)

Subject dedication of professorship:

Greek History, Antiquity Studies and Epigraphics

Time of appointment:

following vacancy of the Professorship of Greek History, Antiquity Studies and Epigraphics (presumably as of 1 October 2026)

Subject dedication of professorship:

Ancient History and Papyrology

Time of appointment:

following vacancy of the Professorship of Ancient History and Papyrology (presumably as of 1 October 2026)

Subject dedication of professorship:

Modern Greek Studies

Time of appointment:

following vacancy of the Professorship of Modern Greek Studies (presumably as of 1 October 2027)

Subject dedication of professorship:

Medieval and Early Modern Art History

Time of appointment:

following vacancy of the Professorship of Medieval and Early Modern Art History (presumably as of 1 October 2027)

Subject dedication of professorship:

Early Modern Art History (with Focus on Baroque)

Time of appointment:

following vacancy of the Professorship of Early Modern Art History (with Focus on Baroque) (presumably as of 1 October 2026)

Subject dedication of professorship:

Austrian History of the 19th and 20th Centuries

following vacancy of the Professorship of Austrian History of the 19th and 20th Centuries (presumably as of 1 October 2027)

Subject dedication of professorship:
**Jewish Studies with a Focus on Persecution
History and Antisemitism Studies**

Time of appointment:
following vacancy of the Professorship of
Jewish Studies
(presumably as of 1 October 2027)

**Future professorships subject to
availability of funds**

Subject dedication of professorship:
Medieval and Modern Numismatics

Subject dedication of professorship:
Museum Studies

Subject dedication of professorship:
Historical Anthropology

Subject dedication of professorship:
**Multimodal Approaches in the Digital
Humanities with a Focus on Images and
Objects**

4.7 Faculty of Philological and Cultural Studies

4.7.1 Objectives

As part of the humanities, the disciplines of the Faculty study the world's cultures in their linguistic dimensions, their interregional and global connections, as well as their specific diversifications. An approach – based on methodological and historical reflection – that addresses language, literature, music, as well as artefacts and media of every type, ensures a competent, creative examination of the cultural heritage, and provides the insight that enables the interpretation of present-day processes. Research and teaching at the Faculty cover a wide range of subjects, and its basic research thus contributes to the understanding of cultures and identities and provides expertise with regard to the establishment of cultural, economic and political relationships.

The range and methodological orientation of the subjects at the Faculty of Philological and Cultural Studies is unique in Austria. All disciplines take historical dimensions into account, and use methods of literature studies, linguistics, media studies and cultural studies. In the field of area studies, the socio-economic developments in Africa, Asia and Latin America are examined. With regard to the historical and cultural dimensions of texts and media, the disciplines at the Faculty closely cooperate especially with the Faculty of Historical and Cultural Studies, and with regard to the social aspects of its research, links with the social sciences have been established. In addition, the Faculty collaborates with many other actors at the University of Vienna, particularly in the areas of philosophy, education, religious and social studies, translation studies, computer science as well as cognitive and neuroscience. In the future, the Faculty aims to intensify its inter-faculty networks in the context of the digital humanities and the MediaLab.

In addition to a wide range of bachelor's and master's degree programmes, as well as a broad doctoral programme, the Faculty contributes to teacher education in many teaching subjects. It plays an active role in the implementation of the new curricula for the teacher education programmes, and is committed to the promotion of research in the field of subject didactics. In this respect, the Faculty cooperates with the Centre for Teacher Education.

4.7.2 Thematic Areas and Key Research Areas

The activities of the Faculty of Philological and Cultural Studies are grouped into four thematic areas.

Cultures and identities in Europe: The theme of culture and identity plays an important role in all European philologies as well as in musicology, theatre, film and media studies, and in linguistics. An intensive exchange is maintained with other humanities and social sciences in this field. The large number of disciplines that focus on the cultures, identities, languages and literatures also of the smaller European countries is an outstanding feature of the Faculty, and rarely found in other European universities. The language profile of Slavic studies and Romance studies is indeed highly diversified. Musicology researches complex questions relating to music, the history of music as well as the perception and effects of music, and it does so from the perspectives of history, philology, cultural anthropology, cultural studies, sociology, science and psychology. All of the above disciplines promote the process of reflection on European identities and cultures. Moreover, they respond to the process of global cultural diversification by intensifying the examination of the worldwide influence of European culture and the way it is represented outside Europe.

Cultures and identities outside Europe: Numerous subject areas and disciplines study cultures and identities in a global sense, in close cooperation with experts in history, social and political science. East Asian studies focus on the present day; and with regard to Southern Asia, the Middle East and Northern Africa, the aspects of contemporary social and cultural anthropology are complemented by historical and philological dimensions. The Faculty is strongly committed to the further advancement of its philological core competencies that are among its key characteristics. Disciplines whose focus used to be almost exclusively on Europe have, to an increasing extent, started to discuss non-European questions, for instance with regard to the reception of the colonial heritage in Asia, Africa and Latin America. Against the background of increasing globalisation, phenomena of migration and diaspora have become more important in disciplines such as African studies and Romance studies. Owing to their expertise in various aspects of non-European societies, these disciplines have the potential to respond to changing requirements resulting from globalisation, to overcome obsolete approaches to what is regarded as foreign, and to thus contribute to social issues in a constructive way – which complements the profile of social and economic disciplines at the University.

Systemic and functional dimensions of communication: Linguistic themes are treated both in the context of individual philologies and across different languages. Here, linguistics and the linguistic subfields within other disciplines, particularly African studies, English and American studies, Finno-Ugric studies, German studies, Romance studies and Slavic studies, are linked within the Faculty. The methodology in all fields is oriented towards socio-historical, systemic-functional and applied studies of language. Multilingualism and language contact, as well as the investigation of language attitudes in different social and political contexts, are important research focuses at the Faculty, which is, in addition, linked with the Faculty of Philosophy and Education, the Faculty of Social Sciences and the Centre for Teacher Education. Beyond the Faculty, the systemic-functional area of linguistic research is linked with psychology, cognitive science and neuroscience.

Aesthetics and mediality of communication: Aesthetic communication is an integral part of all disciplines at the Faculty. Within the traditional philologies, this especially applies to literature studies. In this field the Faculty provides an opportunity of investigating the aesthetic communication of different channels (music, theatre, literature, film, digital media) as well as of diverse forms of cultural and linguistic expression, also looking at them from the perspectives of philology, literature studies, cultural studies and comparative literature. Especially in the (sub)disciplines with a historical orientation, the analysis and (digital) preparation of manuscripts – in the sense of material philology – plays an important role. On the one hand, additional focuses are defined by the specific situation of Vienna and Austria (with regard to both the availability of ample material and its special position of geographical contact); and on the other, the Faculty regards itself as a pioneer in the discourse on literature, media and cultural theories, even beyond the Austrian context.

In order to further its successful research areas, the Faculty will, over the next few years, focus on cultural and social transformations in Asia and Africa, on aesthetic communication and mediality, as well as on language development, language contact and language attitude, as key research and development areas that respond to strong societal demands on the one hand, and reflect current developments in research on the other. Finally, even though the Faculty has increasingly focused on international contexts, it still needs to preserve the special characteristics that Vienna possesses as a location.

Cultural and socio-cultural transformations in Asia and Africa

This key research area continues the successful research areas of contemporary Asia, but includes an additional continent, and more specifically focuses on processes of transformation and their historical basis, in order to contribute to the current social discourses on mobility, migration, identity and diaspora phenomena, in line with the Third-Mission function of the University. This key research area draws on existing similar research areas of other faculties, e.g. the Faculty of Social Sciences.

One focus is on researching the African diaspora with regard to its global relationships with the Atlantic area (the Americas and the Caribbean) and Eastern Asia. Further challenges regarding the study of transformation processes in economic, political, cultural and social institutions in the countries of Eastern Asia include regionalism as well as gender issues and environmental policy.

When studying transformation processes in the societies of Southern and Central Asia as well as the Middle East including Northern Africa, the focus is on the area of religious studies (covering synchronic and diachronic aspects) and on interdisciplinary research into the socio-cultural *longue durée* in the Middle East.

Aesthetic communication and mediality

Aesthetic communication is a key subject of the humanities and cultural studies that is increasingly becoming the focus of its methodological reflections when discussing the challenges of the digital era. The resulting social, political and, again, aesthetic dimensions of this dynamic play a central role in the Faculty's research.

After implementing the initiatives in the field of aesthetic communication presented in the past *Development Plan*, questions of mediality, multimodality and digital media will also become a particular focus in the disciplines of literature studies and the philologies, theatre, film and media studies as well as musicology. Here, the MediaLab provides an important infrastructure.

Language development, language contact and language attitudes

The linguistic disciplines at the Faculty attach particular importance to a productive exchange between a formal linguistic view of language and its investigation as a socially embedded means of communication.

After establishing the area of psycholinguistics as part of the area of cognitive science at the Neuroscience Cluster of the University, intra-faculty

cooperation in the fields of linguistics and musicology will be intensified further. This includes an enhancement of the academic profile in the field of language teacher education research and professional content knowledge, in cooperation with the Centre for Teacher Education and the university colleges of teacher education.

Numerous research projects at the Faculty examine the contact of national languages with autochthonous minorities and current migration languages. This field provides a good opportunity for contributing to the Third Mission of the University and for cooperating with other key research areas at the University.

4.7.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- African Languages and Literature
- American Studies
- Applied Linguistics
- Applied Linguistics and Philology
- Arabic Studies
- Assyriology (Focus on Akkadian Studies)
- British Literature
- Chinese Studies
- Chinese Studies with Emphasis on Social Studies
- Classical Philology (Greek)
- Classical Philology (Latin)
- Comparative Indo-European Linguistics
- Comparative Literature
- Comparative Musicology (Ethnomusicology)
- Contemporary English Literature
- Cultural and Intellectual History of Modern South Asia
- Cultural History of Audio-Visual Media
- Digital Philology (joint appointment with the Faculty of Computer Science)
- East Asian Economy and Society
- Eastern Slavic Literature
- English and American Language and Literature (Linguistics)
- English and Anglophone Literatures
- English Cultural and Literary Studies
- English Language Education (joint appointment with the Centre for Teacher Education)
- English Linguistics
- English Linguistics (joint appointment with the Centre for Teacher Education)
- English Linguistics: Variation and Cognition

- Film Theory
- Finno-Ugric Studies
- French and Spanish Literature and Cultural Studies
- French and Spanish Literature Studies with Special Emphasis on Francophonie in French Studies
- General Linguistics
- German as a Foreign Language
- German as a Second Language
- German Linguistics (History of German Language and Linguistics of Varieties)
- Historical Linguistics of English
- History and Society of Africa
- Ibero-Romance Studies
- Indology
- Islamic Religious Education
- Islamic Studies
- Japanese Studies with Emphasis on Cultural Studies
- Japanese Studies with Emphasis on Social Studies
- Korean Studies
- Late and Medieval Latin Philology
- Medieval German Language and Literature
- Medieval German Literature with Special Emphasis on the Late Middle Ages and Including the Early Modern Period
- Medieval Scandinavian Philology and Medieval German Philology
- Modern German Literature
- Modern German Literature and its Didactics (joint appointment with the Centre for Teacher Education)
- Modern German Literature with Special Emphasis on Austrian Literature
- Modern German Literature with Special Emphasis on the Theory of Literature and Media Studies
- Modern Historical Musicology
- Modern Latin Philology and Classical Latin Studies
- Musicology with Special Emphasis on Medieval Historical Musicology
- Psycholinguistics
- Romance Linguistics and Communication Science
- Romance Linguistics: Interculturality and Multilingualism
- Romance Philology
- Romance Philology (with Special Emphasis on Hispanic Studies)
- Romance Studies (Linguistics)
- Russian Philology and Eastern Slavic Linguistics
- Scandinavian Studies
- Slavic Linguistics and Textual Philology
- South Slavic Literature and Cultural Studies (with an Emphasis on Philology)
- Subject-Specific Didactics (Language Teaching and Language Learning Research) (joint appointment with the Centre for Teacher Education)
- Systematic Musicology

- Theatre and Media Cultures of the Modern Period
- Theatre Studies and Cultural Studies
- Tibetan and Buddhist Studies
- Turkish Studies
- Western Slavic Linguistics
- Yiddish Literature and Cultural Studies

4.7.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Applied Linguistics of Contemporary English
- Digital Media Theory/ Digital Media Aesthetics
- Eastern Slavic Linguistics (with Special Emphasis on Russian)
- French and Italian Literature and Media Studies
- Islam in Contemporary Society
- Modern German Literature with Special Emphasis on the 17th and 18th Centuries
- Western Slavic Literature and Cultural Studies

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Languages and Cultures of Contemporary Inner and South Asia

Time of appointment:

following vacancy of the Professorship of Cultural and Intellectual History of Modern South Asia (presumably as of 1 October 2022)

Subject dedication of professorship:

Korean Studies

Time of appointment:

following vacancy of the Professorship of Korean Studies (presumably as of 1 October 2022)

Subject dedication of professorship:

German Linguistics (Contemporary German)

Time of appointment:

following vacancy of the Professorship of German Linguistics in accordance with section 99, para. 1 of the Universities Act (presumably as of 1 March 2023)

Subject dedication of professorship:

Cultural and Intellectual History of Pre-Modern South Asia

Time of appointment:

following vacancy of the Professorship of Indology (presumably as of 1 October 2023)

Subject dedication of professorship:

Tibetan Studies

Time of appointment:

following vacancy of the Professorship of Tibetan and Buddhist Studies (presumably as of 1 October 2023)

Subject dedication of professorship:

Cultural and Intellectual History of the Islamic World

Time of appointment:

following vacancy of the Professorship of Islamic Studies (presumably as of 1 October 2024)

Subject dedication of professorship:

Early German Literature with a Focus on the Late Middle Ages and the Early Modern Period

Time of appointment:

following vacancy of the Professorship of Medieval German Literature with Special Emphasis on the Late Middle Ages and Including the Early Modern Period (presumably as of 1 October 2025)

Subject dedication of professorship:

Theatre and Media Cultures of the Modern Period

Time of appointment:

following vacancy of the Professorship of Theatre and Media Cultures of the Modern Period (presumably as of 1 October 2025)

Subject dedication of professorship:

Comparative Literature

Time of appointment:

following vacancy of the Professorship of Comparative Literature (presumably as of 1 October 2025)

Subject dedication of professorship:

English Historical Linguistics

Time of appointment:

following vacancy of the Professorship of Historical Linguistics of English (presumably as of 1 October 2025)

Subject dedication of professorship:

East Slavic Literature

Time of appointment:

following vacancy of the Professorship of Eastern Slavic Literature (presumably as of 1 October 2026)

Subject dedication of professorship:

African Linguistics and Philology

Time of appointment:

following vacancy of the Professorship of African Languages and Literature (presumably as of 1 October 2027)

Subject dedication of professorship:

Finno-Ugric Studies

Time of appointment:

following vacancy of the Professorship of Finno-Ugric Studies (presumably as of 1 October 2027)

Subject dedication of professorship:

Arabic Studies

Time of appointment:

following vacancy of the Professorship of Arabic Studies (presumably as of 1 October 2027)

Subject dedication of professorship:

French Literature and Cultural Studies

Time of appointment:

following vacancy of the Professorship of French and Spanish Literature Studies with Special Emphasis on Francophonie in French Studies (presumably as of 1 October 2027)

Professorships in connection with the establishment of the bachelor's programme in Islamic Theology

In connection with the establishment of the bachelor's programme in Islamic Theology, section 24 of the 2015 Islam Act provides for up to 6 positions for highly qualified teaching staff at the University of Vienna, preferably either as professorships (section 98 or section 99 of the Universities Act), or as tenure track positions. According to the 2015 Islam Act, the financing obligation rests with the Federal Government, irrespective of the 2002 Universities Act. Taking the situation on the academic labour market into account, in the medium term the aim is to ensure an appropriate mix of the above types of positions, while taking into account the academic subjects to be covered and the personalities of the academics who are working at the University of Vienna in this area.

For these six positions, the following subject dedications have been defined, provided that advertising and recruitment takes place on the basis of section 98 of the Universities Act.

Subject dedication of professorship:

Islamic Theological Philology: Textual Studies of Koran and Hadith

Subject dedication of professorship:

Islamic Systematic Theology (kalām)

Subject dedication of professorship:

Jurisprudence and Ethics in Islam

(cooperation with the Faculty of Law with regard to advertising and recruitment)

Subject dedication of professorship:

Islam in Contemporary Society

(cooperation with the Faculty of Social Sciences with regard to advertising and recruitment)

Subject dedication of professorship:
Alevi Theological Studies

Subject dedication of professorship:
Islamic Religious Education
(cooperation with the Faculty of Philosophy
and Education with regard to advertising and
recruitment)

**Future professorships subject to
availability of funds**

Subject dedication of professorship:
Digital Editing

Subject dedication of professorship:
Media Psychology and Digital Change
(joint appointment with the Faculty of
Psychology and the Faculty of Social Sciences)



4.8 Faculty of Philosophy and Education

4.8.1 Objectives

Research and teaching at the Faculty belong to the 21st-century knowledge landscape. Philosophy and education have been closely linked throughout the history of Western culture, and their respective self-images have been based on their interaction. The question as to our position in the world, our ability to acquire knowledge and the meaning of, and reasons for, our actions are interwoven with questions concerning the conditions, possibilities and objectives of education. The developments in the Faculty's fields of expertise are complex and extend far into other disciplines.

The Faculty sees itself as a place where classical and current philosophical and educational approaches are advanced at a theoretical level and addressed in an interdisciplinary and transdisciplinary exchange. Both basic and application-oriented research are situated in this context. The academics of the Faculty's two disciplines are aware of their responsibility with regard to theory and as far as socio-political issues are concerned. They are aware of the need for, and the opportunities opened up by, innovative interdisciplinary and transdisciplinary research and teaching.

The main strategic goal of the Faculty is thus to intensify basic research in its own fields and to support the advancement of interdisciplinary and transdisciplinary research, with its disciplines providing the basis for this approach.

The goal is to find new answers to phenomena in our social and cultural worlds, to normative questions and ethical problems that continue to grow in the context of rapid change of technology and ways of life, to questions regarding the conflicts between cultural identity and global networks, human rights, education and educational processes, to diversity and inclusion at school and in society, as well as to gender issues. These are the challenges that the academic world is facing today, and which are (also) reflected in the questions addressed by the key research areas of the Faculty. In addition, the Faculty supports model initiatives and research-based investigations of pressing questions of the present day (Third Mission). Cooperation outside the university field also plays an important role. This particularly applies to institutions and organisations in the area of education, e.g. preschool education, school education and adult education, as well as other relevant social stakeholders, for instance, in the social system and in development cooperation.

One key objective of the Faculty is to enhance the cooperation of the Department of Philosophy with the Faculty of Law with regard to ethics/ applied ethics, and with the Faculty of Business, Economics and Statistics in the field of philosophy and economics, and to continue to integrate the productive existing cooperation (the Vienna Circle Institute's cooperation with the Faculty of Historical and Cultural Studies in the areas of history of science; cooperation with life sciences, neuroscience and psychology in the area of cognitive science) into its research.

With regard to general educational fundamentals, the Faculty contributes to the continuous advancement and expansion of research-led teaching subjects for all teacher education programmes at the Centre for Teacher Education. It is an important goal of the Faculty to continue and intensify its cooperation with the Centre for Teacher Education in all key research areas concerning education.

The development plan of the Faculty of Philosophy and Education is oriented towards preserving the necessary core areas and supporting specialisation, as well as cooperation in research and teaching at all levels.

4.8.2 Key Research Areas

Justification and critique of norms in ethics, religion, law and politics

Research in this key area focuses on the justification and critique of moral, religious, legal and political norms, which is challenging in both theoretical and social terms.

The main research subject is the justification of decisions concerning what is good, just and right in the philosophical discourse both within and outside Europe. The generation of theories is based on classical and modern theories and their continuation in present-day ethics, political philosophy, religious philosophy, legal philosophy and social philosophy. The goals here are the advancement of the theoretical basis of ethics, with special emphasis on action theory and decision theory, the advancement of basic research into the theory of democracy and ethics of institutions, as well as research in the areas of philosophy and economics. The focus of applied ethics is on systematic questions particularly with regard to medical ethics, the ethics of ageing, animal ethics and environmental ethics, as well as ethical and political digitalisation. Research in the area of religious philosophy focuses on the relationship between religion and science, religion and social transformation, and religion and violence. In addition, the questions studied in this key research area include the significance of philosophy and ethics for the

political, cultural and social discourse, as well as forms, methods and contents of the teaching of philosophy and ethics at upper secondary schools.

Theories of knowledge, of science and of the social world

This key research area studies epistemology and the philosophy of natural and social sciences as well as of cultural studies, the philosophy of mathematics and logic, and also social ontology, from a historical and systematic perspective. The historical perspective extends from ancient philosophy to Kant and the subsequent history of the reception of those ideas up to the 21st century. In this context, the tradition of the philosophy of science is closely linked with the Vienna Circle and logical empiricism, as well as related approaches. A number of research projects aim at analysing the various forms of knowledge, particularly with regard to their historical, (inter-)cultural, educational, social, political and technological character; for instance, with regard to the history and philosophy of science, cognitive science, the philosophy of Wittgenstein, the philosophy of social robotics (philosophical analysis of the interaction with and between robots), as well as social epistemology. Research into social ontology and the phenomenology of social worlds mainly focuses on the question of the structure, establishment and status of groups, organisations, social roles, conflict and cooperation.

Mind – body – art – culture

This key research area contributes to the diversity and plurality of research on the one hand and to academic interaction and productive cooperation on the other. What has usually been regarded as separate in view of the classical categories of philosophy is linked and investigated in a new way. Fundamental questions that examine both contemporary and historical perspectives with regard to their mutual sustainability are discussed in a wide range of subjects ranging from the philosophy of mind, of language, of media and technology, to aesthetics and philosophy of culture. The challenge for philosophical research is to develop interdisciplinary projects that link the different areas of philosophy and other disciplines in order to generate questions and methods in a new way.

New research links open up (1) innovative lines of investigation in the areas of phenomenology, psychiatry, philosophy of science and intercultural philosophy, to examine themes such as intentionality, perception, senses and emotions; (2) questions of subjectivity, intersubjectivity and alterity, which have proved to be more resistant than has been assumed so far (e.g. body and language, violence, the relationships between

theories of difference and political orientation); (3) an experimental research area based on the study of aesthetics, phenomenology, sensibility and arts.

Philosophical and pedagogical approaches to diversity and global development

This key research area discusses the fundamental questions and development perspectives that have arisen in view of the new challenges of globalisation, as well as social and cultural change. Its theoretical and empirical research, conducted from a systematic and historical perspective, is reflected in international, inter- and transcultural as well as interdisciplinary networks, and in cooperation with other universities in Europe, Asia, Africa, America and Australia. Specific attention is paid to the traditions of philosophy outside Europe, as well as to questions of educational development research, particularly with the countries of the global South. The focus is on questions and problems of democracy, the public, human rights, religion, social diversity, multiculturalism, the media, migration and mobility, as well as justice in a global context. The interaction between philosophy and education critically reflects on the social mainstreams, and specifically studies traditions of thinking within and outside Europe in order to outline ethical and humanitarian issues under the conditions of global developments. The framework for this key research area consists of forward-looking approaches that connect different cultures, disciplines and lifeworlds and that can, at the same time, contribute to their preservation.

Education in schools and in society

The research activities in this area relate to the theory, practice and practical implementation of institutional teaching and learning, school education and socialisation, media education and the corresponding questions of profession and professionalisation research in educational systems. This also extends to the areas of social work, adult education, media education, pre-school education, psychotherapy and counselling.

This key research area focuses on the fundamental aspects of the discipline, for instance with regard to research into the consequences that social transformation has for the self-conception of education, the addressing of educational questions and the relationship between educational research and educational theory. In addition, empirical questions are examined against the background of a systematic view of the problem horizon. Another objective is to establish research on school and education as a discipline that is firmly grounded in educational



theory and based on historical and comparative knowledge, and which places the focus on the consequences that the resulting transformation of school and education will have for stakeholders. This requires both basic research (for instance, on historical, social and media-related forms of change) and new empirical studies in which global, national and subnational processes are taken into account. In this research area, as in the other research areas, a great variety of methods are often combined. Finally, the methods and methodologies, their further development, justification and links are also examined. In this research area, as in the other research areas, a great variety of methods are often combined. Finally, the methods and methodologies, their further development, justification and links are also examined.

Diversity and inclusion

The approaches to education and development studied in this key research area focus on the rights of vulnerable and marginalised persons, particularly disabled people. Here, the practical aim of research is to help them participate in

all spheres of life and to bring about structural changes in institutions, as well as to endeavour to take into account the diverse situations and needs of all people. This is done with reference to different theoretical traditions, for instance disability studies and psychoanalysis.

This includes research into diversity in educational processes, for instance due to disability, social background, social inequality, gender and migration background, including the experience of flight ('forced migration').

In particular, the Faculty initiates academic activities and encourages structural developments aimed at implementing the provisions of the UN Convention on the Rights of Persons with Disabilities in the educational system. It thus contributes to the teaching of general educational fundamentals.

Educational processes: biographical and historical perspectives

This key research area examines education as a process of development over time and focuses on the ways in which processes of education, socialisation and learning are structured in the course of life and addressed by the educational system, taking into account the aspects of social structures, the construction of these processes through culture and media, as well as subjective attitudes and approaches. In this context, the transition between different stages of life is examined at several levels: with regard to the transition between different educational institutions, from preschool education to school, university and eventually to working life and family life, further education and education in old age; with regard to individual biographical processes of mastering these transitions, and finally with regard to challenges for educational practice. Following international discourses of research into transitions, theoretical approaches to education (biography research, educational theories, psychoanalytical education, institutional analysis, etc.) are linked with empirical studies. This research area contributes to the current academic discourse on education and transition, and also introduces new approaches to the professionalisation of the practice of education (assistance and advice for transition stages, services for special problems and problem groups, transition management of institutions, etc.). And it is relevant not least in view of new educational approaches (e.g. lifelong learning and the permeability of educational institutions).

4.8.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Analytic Philosophy with Special Emphasis on Philosophy of Language
- Applied Philosophy of Science and Epistemology
- Comparative Research on Education and Schooling
- Education and Inequality
- Education in the Life Course
- Education with Special Emphasis on Psychoanalytical Education, Special Needs and Inclusive Education as well as Social Education

- Education/Philosophy of Education
- Empirical Educational Research
- Empirical Educational Research and Theory of Education
- Ethics with Special Emphasis on Applied Ethics
- European Philosophy and Continental Philosophy
- Inclusive Education and Disability Research (joint appointment with the Centre for Teacher Education)
- Media Education with Special Emphasis on New Media
- Philosophy and Ethics in School and Society
- Philosophy in a Global World
- Philosophy of Media and Technology
- Philosophy of Science
- Philosophy of Science and Cognitive Science
- Political Philosophy and Social Philosophy
- Research on Schooling and Teacher Education (joint appointment with the Centre for Teacher Education)
- School Pedagogy with Particular Emphasis on Social, Cultural and Linguistic Diversity (joint appointment with the Centre for Teacher Education)

4.8.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Moral and Political Philosophy
- School Pedagogy with Particular Emphasis on Secondary Education (joint appointment with the Centre for Teacher Education)
- Theoretical Philosophy

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:
Philosophy of Enlightenment and Modern Thought

Time of appointment:
following vacancy of the Professorship of European Philosophy and Continental Philosophy (presumably as of 1 October 2021)

Subject dedication of professorship:
Intercultural Philosophy

Time of appointment:
following vacancy of the Professorship of Philosophy in a Global World (presumably as of 1 October 2022)

Subject dedication of professorship:
Education in the Life Course
Time of appointment:
following vacancy of the Professorship of
Education in the Life Course
(presumably as of 1 October 2022)

Subject dedication of professorship:
Foundations of Education
Time of appointment:
following vacancy of the Professorship
of Education/Philosophy of Education
(presumably as of 1 October 2024)

Subject dedication of professorship:
Epistemology
Time of appointment:
following vacancy of the Professorship of
Applied Philosophy of Science and Epistemology
(presumably as of 1 October 2025)

Future professorships subject to availability of funds

Subject dedication of professorship:
Aesthetics

Subject dedication of professorship:
Adult and Continuing Education

Subject dedication of professorship:
Social Pedagogy

4.9 Faculty of Psychology

4.9.1 Objectives

Research and teaching at the Faculty of Psychology, in line with the general objectives of this discipline, focus on the description and explanation of human experience and behaviour, as well as the changes they undergo. The explicit objective is to address everything from the foundations of the relevant processes to the (evidence-based) application and transfer of the insights gained. Basic and application-oriented research are regarded as equally relevant and as interrelated. Diversity in research approaches and topic areas is seen as an asset. On the basis of research approaches in the areas of neuroscience, cognitive science and social sciences that complement each other in an integrative way, the Faculty seeks to make theoretically-sound and empirically-testable contributions to the advancement of academic knowledge as well as its transfer. Over the next few years, particular emphasis will be placed on gaining insight into the psychological mechanisms and effects of societal and technological change on experience and behaviour, to thus contribute to the Sustainable Development Goals (UN, 2015). Examples of fields of action in which knowledge of psychological processes in this regard will be of great relevance include health and well-being; education; sustainability in work and the economy; environment and climate change; demographic change; as well as reduction of social inequality; and digitalisation. It thus becomes apparent that the research activities at the Faculty are also aimed at providing relevant input in terms of social responsibility, and that the Faculty regards the Third Mission as one of its explicit tasks.

In addition to research on the genuine psychological aspects of the above fields, a further goal is to approach this research in an interdisciplinary way, as part of the international research arena, and in cooperation with related disciplines (such as cognitive science, life sciences, education, business and economics, as well as computer science, philosophy, sociology and medicine). The Faculty is oriented towards a wide variety of methodologies and regards their intensified integration as an especially promising endeavour. Consequently, a high-quality research infrastructure is of great importance and represents a decisive factor for the Faculty's success. This particularly applies to the further development and profiling – (based on an evaluation conducted in 2024/2025) – of the Faculty's Outpatient Unit for Research, Teaching and Practice.

4.9.2 Thematic Areas and Key Research Areas

The Faculty is undergoing a period of personnel changes. The thematic areas and key research areas below will therefore need to be reviewed in 2023. To further specify the aforementioned general objectives of the Faculty, the next few years will be characterised by basic and application-oriented research with the goal of gaining academic insights into the following broad thematic areas. The focus will be primarily on psychological processes and foundations in the context of societal change for individuals and groups, in order to gain further insights with regard to meeting the Sustainable Development Goals.

Thematic area of cognition, emotion and methods in psychology: Cognition and emotion, as well as their interactions, play a special role in almost all areas of human experience and behaviour. In order to understand these central phenomena more profoundly, laboratory experiments and neuropsychological research approaches are primarily being pursued. Moreover, methods are being developed and advanced that can provide answers to open questions concerning the neuronal biological basis and the functional principles and mechanisms of cognition and emotion. This particularly includes aspects of visual cognition and attention, their interaction with emotions for the origination of aesthetic processes, the cognitive and emotional foundations of social behaviour, their neurophysiological basis, as well as their potential role in the development, diagnosis and treatment of clinical disorders. Additional important input is being provided through methods of research synthesis, machine learning and metascientific approaches. Research in this field is often interdisciplinary and characterised by cooperation with, for instance, experts in the areas of cognitive science and neuroscience, clinical psychology and neuropsychology, as well as cognitive biology. Over the next few years, this thematic area will be expanded to include innovative application-related research.

Thematic area of occupational, economic and social psychology: People have to cope with massive challenges and changes at work, in the economic world and in society. Workers face the need to adapt to new and flexible requirements at work, and a prolongation of their working lives. Consumers have increasingly become active participants in the value chain, and need to consider an increasing variety of products and information as a basis for decision-making at the same time. Citizens are confronted with complex rules and incentive structures. Businesses, marketing experts and government authorities, in contrast, are aiming to influence people's behaviour and to meet certain targets that may be

relevant at the local level (e.g. for the company's profit) or in global terms (e.g. reducing global warming). How can workers in this changing environment remain productive, motivated and healthy in the long term? How can consumers attain their individual goals, in line with central social values? How can cooperation between citizens and public institutions be encouraged, and how can behaviour be regulated by means of motivating nudging to influence decision-making? The thematic area of occupational, economic and social psychology examines these questions from the perspective of work and organisational psychology, psychology of motivation, economic psychology, consumer research and social psychology, using a wide variety of methods (e.g. experiments, diary studies, surveys, panel studies and field studies).

Thematic area of developmental and educational psychology: The range of research activities in this area includes the psychological basis of development and, in particular, learning, as well as the transfer of research results in order to meet societal challenges as part of the Third Mission. Its research programme combines theoretical modelling, corresponding measurement approaches, and intervention measures with implementation plans; it thus establishes links between the relevant subdisciplines of psychology. In addition, by cooperating with other research areas at the Faculty, the aim is to achieve broader perspectives on the theme of development and education. Regarding research subjects, the focus lies on the social, cognitive and emotional development of babies and children, on family psychology issues such as parenthood, divorce/separation, parent-child-relationships, and the transition to adulthood, as well as processes of ageing. Lifelong learning is a further research focus, particularly regarding the development and enhancement of motivation and emotion in learning and achievement contexts, as well as the development and modification of gender stereotypes in educational contexts. The activities of this thematic area include planning of prevention, training and intervention measures as well as their evaluation and implementation, thus enabling responses to a changing society. The innovative input of this research programme is its integration of aspects of developmental psychology as well as educational psychology, in order to gain profound insights into processes of development and of learning in different contexts throughout life.

Thematic area of clinical and health psychology: The focus of this area is on advancing the understanding of experience and behaviour that is relevant in regard to clinical psychology and health psychology. In addition to individual human traits, characteristics of people's social environment and cultural background are taken into account. Its research perspectives include psycho-

logical resilience, as well as human vulnerability in diverse walks of life and at different ages. In the context of the biopsychosocial model, its research focuses on biological, cognitive, affective, behavioural and social processes of health and impairment, while also bearing in mind social diversity and psychological regulation processes. Specific research questions concern factors and conditions relating to the origin, recovery and preservation of mental and physical health and illness. Its research methodology, which is based on behavioural science, is augmented by biopsychological and neuroscientific methods. This approach contributes to a basic understanding of psychological coping processes, risks and resources that require prevention, support or intervention. This enables insights to be gained that are relevant for psychological assessment and consultancy, as well as for treatment by health psychologists and clinical psychologists, and for psychotherapy.

The Faculty has defined specific key research areas within (and sometimes across) the thematic areas, which are particularly intended to enhance the visibility of the Faculty and its objectives.

Psychology of aesthetics

This key research area runs a research programme that studies the psychological mechanisms of aesthetic experience primarily in the visual domain. It is mainly oriented towards aspects of perception and emotional processing as well as their neurophysiological bases. Current projects examine neuronal mechanisms, aesthetic production (drawing, dance), human-animal comparisons, aesthetics in everyday life, connections with resilience, health and well-being, as well as the function of art in museums and in general, and in regard to current societal challenges. These research approaches have a pronounced interdisciplinary orientation and are linked with cognitive science, art history, biology, arts, museums, neuroscience, and with international researchers.

Changes and decisions in organisations, the economy and society

This key research area studies how people respond to the challenges they are facing at work, in the business world and in society today. It particularly focuses on changes in organisations and in the world of work, including flexibilisa-



tion and absence of boundaries, self-regulated behaviour, the consequences of monitoring and trust with regard to commitment to rules and the response of consumers to the permanent availability of products. Its research is based on theories from work psychology and organisational psychology, psychology of motivation, economic psychology, psychology of consumption and social psychology, and contributes to their advancement.

Psychology of lifelong learning

Research in this area has a three-tiered agenda: (1) It addresses the question as to which psychological parameters are relevant for lifelong learning (LLL), and how they develop. By means of experimental basic research, the fundamental cognitive, emotional and neurophysiological mechanisms in babies are investigated. In older age groups, the focus is on the basis and consequences of emotions, motivation and self-regulation, taking into account various aspects of diversity (such as gender, age and socio-economic status). The theoretical conception of the determinants of LLL explicitly integrates the challenges that students and teachers will be facing in future (e.g. digitalisation). (2) Starting from this basis, innovative (e.g. neuropsychological) paradigms and new measuring instruments will be developed (e.g. including the use of new media in interdisciplinary cooperation). (3) In a third step, intervention measures aimed at promoting LLL and the corresponding implementation strategies will be developed and realised.

Biopsychosocial determinants of health and disease

An additional key research area oriented towards clinical psychology and health psychology studies factors of health and impairment. The focus is on advancing the understanding of experience and behaviour, covering the whole lifespan, that is relevant with regard to clinical psychology and health psychology. In addition to individual human traits, characteristics of people's social environment are also taken into account. Specific research questions are oriented towards the biopsychological model. They address factors and conditions relating to the diagnosis, origin, recovery and preservation of mental and physical health and disease. They are investigated in selected fields such as autism and ADHD, stress-related diseases, post-traumatic stress reactions and behaviour relevant for health. These areas are examined in the context of societal and social changes (e.g. migration, work-related stress, digitalisation, etc.).

4.9.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. For information purposes, the research areas that are currently covered are provided in square brackets. The names outside the square brackets give the official designations. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Applied Social Psychology with a Focus on Decision Making and/or Intergroup Research (Cultural Comparison) [Applied Social Psychology and Consumer Research]
- Biological Psychology [Social, Cognitive and Affective Neuroscience]
- Clinical Adult Psychology
- Clinical Child and Adolescent Psychology
- Developmental Psychology
- Educational Psychology and Societal Changes
- General Psychology [Cognitive Psychology]
- General Psychology [Psychology of Aesthetics]
- Methods of Psychology
- Psychological Research Methods – Research Synthesis
- Psychology [Psychological Research on Education and Transfer]
- Psychology of Ageing
- Psychotraumatology
- Work Psychology [Work and Organisational Psychology]

4.9.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Health Psychology
- Psychology of Motivation
- Social Psychology in the Context of Work, Society and Economy
- Urban and Environmental Psychology

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Organisational Psychology

Time of appointment:

following vacancy of the Professorship of Work Psychology
(presumably as of 1 October 2024)

Future professorships subject to availability of funds

Subject dedication of professorship:

(Clinical-Psychological) Intervention Research

Subject dedication of professorship:

Media Psychology and Digital Change

(joint appointment with the Faculty of Philological and Cultural Studies and the Faculty of Social Sciences)

Subject dedication of professorship:

Cognitive and Behavioural Data Science

4.10 Faculty of Social Sciences

4.10.1 Objectives

The key task of the Faculty of Social Sciences is to provide critical, academically sound analyses of societal challenges and processes of change at global, national and local levels. The societal changes and challenges of the present day are manifold, and result, for instance, from increasing digitalisation, globalisation, climate change or migration. Values and forms of living are diversifying, structures and framework conditions are transforming, roles are being redefined and redistributed, and well-established orders are being questioned. Many urgent questions have thus arisen for the social sciences at various levels – questions to which there will most probably be no simple answers and solutions. Complex challenges will also require the development of adequate analyses and approaches to explanations on the part of the social sciences.

More than ever before, the social sciences are expected to contribute to a better academic understanding of these complex processes of transformation, as well as to participate in finding solutions and supporting ongoing restructuring processes. Beyond making excellent contributions to international academic debates, it is a clearly defined goal of the Faculty to transfer the knowledge that has been generated to different social fields of action and thus to make a significant contribution to the development of social innovations. In doing so, the Faculty assumes its social responsibility as an academic institution.

Research at the Faculty follows theory-driven empirical approaches, uses a great variety of methods, including comparative methods, and covers the entire range from basic to application-oriented research questions. In this respect, the Faculty is committed to international standards of academic excellence. Geographically, research covers almost all regions of the world, with different disciplines having different focuses. At the same time, the Faculty pays specific attention to the Austrian situation in European and global contexts. As research on societal change is increasingly cutting across boundaries of traditional disciplines, the Faculty of Social Sciences aims at establishing close links and cooperation between its different disciplines, and at the expansion of interdisciplinary collaboration with other faculties of the University. Furthermore the Faculty's researchers seek the cooperation with institutions outside the university structure and innovative forms of international collaboration and exchange with scientists with different disciplinary backgrounds from all over the world. This development of the Faculty is promoted by a proactive orientation towards



internationalisation with regard to academics and students.

4.10.2 Thematic Areas and Key Research Areas

The wide range of research subjects covered at the Faculty is best described as a matrix structure. On the one hand, research takes place in eight disciplinary areas, which are characterised by specific methodological approaches, theory formation, a variety of regional focuses and different historical developments. On the other hand, there are seven interdisciplinary key research areas, in which societal problems and challenges of common interest are studied across different disciplinary fields. This structure enables the Faculty to further develop existing strengths and well-established research traditions while creating space for future-oriented innovative research topics.

Social and cultural anthropology studies diverse forms of cultural expression and ways of living from the viewpoint of the actors involved, and from comparative and historical perspectives. The corresponding processes are considered in the context of regional and global develop-

ments. One research focus is on the world outside Europe, on international comparisons and transnational connections. Here, the interactions of global transformations with local processes of the present day are of particular relevance. For the multiple theoretical and methodological approaches of social and cultural anthropology, insights from the 'global South' and areas that are often described as the 'Euro-American periphery' play an important role.

In sociology, the focus is on analyses of current societal challenges and developments in Austria and Europe. Research is oriented towards current societal problems, has a strong empirical orientation and is closely related to contexts of application. It is integrated into international discourses and develops sociological theories on the basis of relevant social diagnoses. The current focuses are (1) work, organisation and gender relations; (2) family, generations, life course and health; (3) migration, cities, social policy and social inequality; as well as (4) knowledge, culture and visual worlds.

The area of political science and government empirically and theoretically addresses questions of politics and governance, state and democracy, and their development and change in

different regions of the world and different policy areas. Four main areas are covered: (1) political theory (research into the history of ideas and the normative foundations of political order, and into the transformation of gender relations and political culture); (2) comparative politics (comparison of political systems in different world regions and the study of democratic representation, of public opinion, political institutions and organisations, as well as different policy fields and policy instruments); (3) Austrian politics (research on political competition, migration and diversity, as well as social policy) and Europeanisation; and (4) international politics (analysis of globalisation, studies of sustainability and resource policies) and European studies. The activities in each of the above fields are characterised by problem-oriented perspectives in research and teaching, a plurality of approaches to research, as well as interdisciplinary cooperation. A common denominator in research is the analysis of processes of political and societal transformation.

Research in the area of communication examines processes of private and public communication through media and technology, as well as its infrastructural conditions. The analyses in this field focus on changes in the forms of mediatization and mediated contents and the resulting effects on individuals, society, politics and gender relations. The main research subjects currently include (1) journalism, (2) political communication research and media policy, (3) advertising and public relations, (4) media history and media innovation/new media, as well as (5) developing new methodologies.

In science and technology studies, the focus is on the increasingly closer links between change in science and technology on the one hand, and social change on the other. Analyses in this field are of great relevance today as innovation in science and technology is regarded as both a means for overcoming major societal challenges and a driver of the economy. However, new knowledge and new technologies often give rise to frequently controversial socio-political questions, as is apparent in the current example of digitalisation. With regard to topics, the focus is on analysing how knowledge and innovation are generated, what role science and technology play in the organisation of societies at global and local levels, and how this is discussed and influenced in democracies. Across different topics, the role of values and evaluations in science and society, as well as questions of responsibility in research and innovation are studied. The interdisciplinary cooperation with natural sciences and techno-scientific fields is of great relevance for science and technology studies at the Faculty.

Nursing science studies questions of nursing as a field of action and covers the whole lifespan of human beings. The pertinent analyses include different levels – from individuals to families as well as social and political structures – and the entire chain of care services. Currently research is undertaken in four thematic areas – i.e. care for the elderly and community care; family care; palliative care; and oncological nursing. Inquiry in nursing science links the views on relevant social phenomena from the standpoints of medicine on the one hand, and the social sciences on the other. In addition to basic research and development as well as the evaluation of interventions, the focus is on health services research and implementation research.

Research in the area of development studies is oriented towards transdisciplinary analysis and reflection of global inequalities, a critical discussion of development cooperation, as well as methodological questions of development research. This integration of different perspectives into the analysis of problem areas is necessary to enable a profound understanding of political, economic, social and cultural processes, dynamics and power structures at the global and local levels. Transdisciplinary development research therefore incorporates the perspectives of different areas of knowledge and practice and is aimed at linking theory and practice.

Demography focuses on an analysis of changes in population sizes and population structures in terms of age, gender, place of residence, qualification, labour force participation rate, and other relevant individual characteristics. Formal demography analyses these changes with the aid of mathematical models that also permit forecasts over several decades based on assumptions on future fertility, mortality and migration. This also includes a substantial analysis of the determinants of these components of demographic change. Another important question relates to the consequences of demographic changes on society, the economy and the environment in all parts of the world.

The Faculty's research profile is complemented by interdisciplinary cooperation. This takes place in a thorough examination of the manifold approaches to methodology in the social sciences, ranging from the application of methods as instruments for testing research hypotheses to highlighting their interaction with theory formation. In addition, the individual disciplines cooperate in seven key research areas. As different methodological and theoretical approaches are combined, it is possible to examine complex societal challenges in a collaborative research effort, and to make them accessible to social stakeholders.

Families, generations and health promotion

Theoretical and empirical research in this area focuses on social and socio-political problems related to families, generations and health promotion. Studies cover issues such as demographic challenges, socio-demographic developments, dynamics and changes in the course of life as well as family life, analysing the effects of current social processes on the course of life, families and family life, as well as studies in health and health promotion, nursing and care services in the context of increasing life expectancy, and the analysis of welfare state interventions.

In terms of topics the focus is on new structures of generational relationships, processes of transformation in the course of life, quality of life at work and in the family, and particularly questions of age-appropriate and health-promoting workplaces and forms of employment.

Gender and transformation

This key research area engages in gender-sensitive theorising and analyses of contemporary transformations of society, economy, politics, media and culture. The themes covered include, for instance, affects, bodies, representations, mobility, migration, violence, participation, knowledge and (in)visibility. Gender is regarded as intrinsically interrelated with other structural categories of society, such as class, ethnicity, 'race', sexuality, religion and disability.

In view of current economic and ecological crises and the rise in social inequality at global, transnational and national levels, in addition to crises of democratic representation, this perspective is of increasing importance: both their social causes and the political, cultural, social and media-related ways of coping, as well as their effects, are gendered. This research area mainly studies questions of changing gender and sex dispositifs, in which the production of social inequality and exclusion, for instance by (gendered) affective and visual technologies as well as body technologies, are key dimensions. Additional analyses study gender policies relevant for the development of democracy and new forms of political participation, as well as for migration patterns and problems of (non-) belonging. The different transformation processes of the present day are understood as being embedded in global transformation processes and studied from a comparative and a transnational perspective.

Governance, democracy, solidarity

Research in this key research area examines the change of governance in different policy fields, geographical regions and political spaces, as well as the corresponding shift in the form and function of social order, statehood and democracy. In this context, nation-states are regarded as levels of institutionalisation of democracy and as communities of mutual solidarity, e.g. in which solidarity has been established in the form of social security systems, and in which moral obligations towards mutual support exist. Under the keywords of new forms of governance, and 'transnational solidarity', studies focus on how shared identities, values and norms are changing along with massively increasing interdependence at the supranational level. Theoretical and political questions of democracy are another commonality of this key research area, as democratic structures and processes are also changing. These questions can be effectively studied by the interaction of the perspectives of social and cultural anthropology, communication, sociology and political science.

Migration, citizenship and belonging

The common interest in this key research area is the exploration of the changing forms and dynamics of migration and integration processes resulting from increasing global interdependencies. This includes a shared understanding that new research perspectives are needed to overcome national and disciplinary, methodological and epistemological restrictions. The representation of different fields of expertise in this key research area results in a diversity of themes and disciplinary affiliations.

Research focuses on the interdisciplinary investigation of new forms of mobility and migration, which come with transnational practices of social integration and constructions of identity, as well as reconfigurations of social inequality, not least as a result of changes in the regulatory framework of migration. Analyses combining perspectives across disciplines include the changing conditions for building relationships between minorities and majorities, mechanisms of social, political and cultural inclusion and exclusion, different (possibly overlapping) individual and collective identities, social and (media-related) representations and constructions, as well as political conflicts and struggles for the distribution of resources, rights and belonging, in terms of social participation and marginalisation.

Political competition and political communication

This key research area analyses the interactions of political actors, citizens, as well as traditional and new media, in democratic systems. Combining the perspectives of political science, communication, sociology and social psychology produces insights into the mutual influences between these actors. Studying the key actors and their interaction from such an all-encompassing perspective is crucial for a realistic analysis of political competition and the quality of political representation in modern democracies.

The main themes covered include political attitudes, emotions and decisions of citizens; the interactions of political parties with voters, media and other societal institutions against the background of mechanisms of political representation; and the role of the media in these interactions. In this context, traditional mass media are both intermediaries of information and actors with intrinsic interests, whereas new media represent a pool of opinions and interests, serving as sources of information as well as means of social communication – with increasing effects on politics and society.

Visual studies in the social sciences

Visual communication, visual politics, the visualisation of facts and of social relationships are becoming increasingly important. These social developments have been referred to as iconic, visual, or as pictorial turn. They in some respects have been studied primarily from a cultural studies perspective. This key research area takes into account these observations of social developments and aims to develop approaches oriented towards social sciences in order to analyse the importance of visual phenomena in current socio-political developments based on an interdisciplinary understanding of theories and methodologies of the social sciences.

The main themes that are currently covered include visual biographies, visual policies, the visual worlds of popular culture, local/global visual spaces, as well as the general level of developing theories and methods. With regard to topics studied, the researchers aim at an exchange across different disciplines in order to examine key themes from different perspectives, to discuss concepts at the metalevel and to develop an interdisciplinary teaching programme for students.

Knowledge, materiality and public spaces

In many areas of contemporary societies, questions of the beneficial interaction between scientific and technological development on the one hand and societal change on the other play a significant role. The topics covered in this key research area range from the complex societal challenges of biomedicine and life sciences, questions of the environment and sustainability, as well as new media/mediatisation, to the interaction between human beings and technology in the areas of robotics, and to the increasing importance of algorithms. In addition, changes within academia, such as developments in institutions and disciplines (particularly with regard to their history) are analysed in an interdisciplinary manner. Across these themes, the following questions are examined: (1) the conditions of knowledge production and relationships between different forms of knowledge; (2) restructuring processes in the production and distribution of knowledge, knowledge infrastructures, and their accessibility; (3) hybridity and new forms of sociality between non-human (e.g. machines) and human actors; (4) new challenges to democratic practices resulting from the interaction with techno-scientific developments.

In addition to a broad interdisciplinary exchange, historical perspectives and cooperation with various fields of the natural sciences and technology are of interest in this key research area.

4.10.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Communication
- Communication
- Communication Science
- Communication with a Focus on Advertising Research
- Communication with a Focus on Public Relations Research
- Comparative Policy Analysis
- Computational Communication Science
- Democratic Governance
- Development Sociology

- Empirical Social Research Methods: Social Network Analysis with Regard to Ethnographic Methods
- International Politics
- Journalism
- Material Culture and Consumption Studies
- Methods of Empirical Social Science with a Focus on Text Analysis
- Methods of Social Sciences
- Nursing Science
- Political Science
- Political Science/Governance and Gender
- Political Theory
- Quantitative Political Party and Election Research
- Social and Cultural Anthropology
- Social Stratification Research and Quantitative Methods
- Social Studies of Science
- Socio-Cultural Anthropology of the Global South
- Sociology
- Sociology of Knowledge and Culture
- Technosciences, Materiality and Digital Cultures
- Urban Sociology

4.10.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Communication with a Focus on Media Change and Media Innovation
- Communication with a Focus on Media Entertainment Research
- Comparative Political Institutions
- Comparative Politics
- International Development
- Medical Anthropology and Global Health
- Political Sociology
- Social and Cultural Anthropology with an Emphasis on Religions and Religious Movements

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship: **Austrian Politics in the European Context**

Time of appointment:

following vacancy of the Professorship of Political Science

(presumably as of 1 October 2022)



Subject dedication of professorship:

Politics and Gender

Time of appointment:

following vacancy of the Professorship of Political Science/Governance and Gender (presumably as of 1 October 2022)

Subject dedication of professorship:

Science and Technology Studies

Time of appointment:

following vacancy of the Professorship of Social Studies of Science (presumably as of 1 October 2023)

Subject dedication of professorship:

Demography

Time of appointment:

following vacancy of the Professorship of Demography in accordance with section 99, para. 1 of the Universities Act (presumably as of 1 October 2024)

Subject dedication of professorship:

Sociology

Time of appointment:

following vacancy of the Professorship of Sociology (presumably as of 1 October 2024)

Subject dedication of professorship:

Social and Cultural Anthropology with a Focus on Migration and Urban Anthropology

Time of appointment:

following vacancy of the Professorship of Social and Cultural Anthropology (presumably as of 1 July 2026)

Subject dedication of professorship:

Urban Sociology

(cooperation with the Faculty of Earth Sciences, Geography and Astronomy with regard to advertising and recruitment)

Time of appointment:

following vacancy of the Professorship of Urban Sociology (presumably as of 1 October 2027)

Subject dedication of professorship:

Environmental Anthropology

Time of appointment:

following vacancy of the Professorship of Material Culture and Consumption Studies (Social and Cultural Anthropology) (presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship:

Gerontological Nursing

Subject dedication of professorship:

Sociology of Digital Transformation with a Focus on Work and Organisation

Subject dedication of professorship:

European Studies

It is intended that the Diplomatic Academy of Vienna co-finances 50 %.

Subject dedication of professorship:

International Politics and International Relations with a Focus on Security

Subject dedication of professorship:

Communication and Media Ethics with a Focus on Digitalisation

Subject dedication of professorship:

Media Psychology and Digital Change

(joint appointment with the Faculty of Philological and Cultural Studies and the Faculty of Psychology)

4.11 Faculty of Mathematics

4.11.2 Thematic Areas and Key Research Areas

4.11.1 Objectives

Besides being an important part of human culture, mathematics plays a special role among the sciences as it provides a unified language for quantitative theories in many different fields. The current “inner development” of mathematics as a scientific subject is, on the one hand, characterised by increasing specialisation, even within subfields. On the other hand, many of the major mathematical breakthroughs in the last years result from interactions between different areas of mathematics. One of the primary goals of the Faculty of Mathematics is to represent the broad scope of this science at the highest international level in research and teaching, while offering extensive services in research and teaching for other scientific disciplines.

Based on the key research areas that form part of strong international networks, the Faculty of Mathematics emphasises the importance of cooperation with applied sciences. The Faculty makes every possible effort to further intensify existing synergies with research groups in biology, physics, astronomy, economics and in the engineering sciences, and to provide and develop an attractive offer for them.

The Faculty of Mathematics cooperates with other faculties of the University, with departments of the TU Wien, the Medical University of Vienna and the Austrian Academy of Sciences (ÖAW). Cooperation with numerous partners has already been promoted, which utilises both synergy effects and complementary advantages. It is one of the objectives of the Faculty of Mathematics to intensify these cooperation agreements, and to create new ones.

The cooperation with the Faculty of Physics in the context of the Erwin Schrödinger International Institute for Mathematics and Physics (ESI) is of particular importance, as this institution enjoys an excellent reputation on an international level. The areas covered by the ESI include theoretical, experimental and computer-supported aspects of the sciences involved.

What is equally important is collaboration with the Wolfgang Pauli Institute (WPI), a research centre that spans different STEM disciplines and Viennese research institutions and cooperates closely with the Faculty – for instance, regarding third-party funded projects and looking after international guests.

Starting from its traditional foci and strengths in analytic number theory, harmonic analysis, biomathematics and mathematical physics, the Faculty of Mathematics has continuously developed its profile. On the one hand, traditional research areas are adapted in view of modern developments, while, on the other hand, new research areas (e.g. differential equations including their numerical aspects, financial mathematics, computational optimisation or discrete mathematics) have been created.

The six key research areas of the Faculty of Mathematics will be described below. In addition to these, subject didactics/school mathematics, whose closeness to the scientific field of mathematics is of utmost importance for teacher education, is an important thematic area at the Faculty of Mathematics, which will be discussed in the chapter on the Centre for Teacher Education.

Logic

Research in the key research area of logic, i.e. the Kurt Gödel Research Center for Mathematical Logic, follows the tradition of Kurt Gödel, who between 1929 and 1931 proved his celebrated completeness and incompleteness theorems in Vienna, one of the most significant achievements of mathematical logic in the modern era. Gödel's work has been ground-breaking for the central fields of modern logic: set theory, model theory, computability theory and proof theory. Research in this area at present focuses mainly on set theory and model theory. Set theory provides both an axiomatic basis for the entire discipline of mathematics, as well as methods for the precise analysis of classification problems in mathematics (descriptive set theory). It has traditionally been closely linked with analysis, ergodic theory and topology. As the logic of mathematical structures, model theory has numerous important applications in algebra, number theory and analysis, and has, in recent decades, developed a pronounced geometrical character.

Biomathematics and dynamical systems

This key research area comprises fields of mathematics with a strong tradition in Vienna, namely the analysis of deterministic and probabilistic models in biology and other natural and social sciences, as well as the study of ergodic theory and dynamical systems.

The research activities in biomathematics address questions that originate from the life sciences, in particular from evolutionary research, epidemiology and biomedicine, ecology,

population genetics, evolutionary game theory and molecular cell biology. Here, the theory of dynamical systems is a cornerstone for the mathematical description of biological processes. In addition, methods of partial differential equations, of stochastics and statistics, networking theory, bioinformatics, as well as computational processes are applied. The study of ergodic theory focuses on the statistical properties of smooth dynamical systems, in particular their mixing properties, both in the finite and infinite measure settings. This is closely linked with statistical physics and number theory. Furthermore, various topological and geometric aspects of dynamical systems are addressed.

Stochastics and financial mathematics

The theory of stochastic processes is applied in many areas of natural and social sciences with a special emphasis on applications in the financial sector, which continue to attract considerable interest. The University of Vienna has thus defined a key research area that links these two areas. With the mathematical theory of probability as a basis, basic research is conducted in this field, in which application is a strong driving force for pure mathematical theory. Questions relating to physics are a typical case in point.

Applications of mathematics in the financial sector have often been driven by ideas that originate in physics, and in some cases, vice versa. Brownian motion is a good example of the latter case. Its mathematical modelling was developed by Louis Bachelier to respond to questions from financial mathematics, several years before Albert Einstein revealed its fundamental significance in the context of physics. Modern examples of applications in the world of finance include questions of portfolio optimisation, as well as the pricing and hedging of derivative instruments in terms of continuous time. The no-arbitrage principle is a central basis for research in the above fields.

Analysis, geometric structures and mathematical physics

The researchers working in this area cover a broad range of topics with strong ties and interactions between them. There are similarities in particular in the application of methods of functional analysis and the theory of differential equations to questions of complex analysis, geometrical analysis, differential geometry and mathematical physics. These methods also establish connections to other key research areas at the Faculty of Mathematics, in particular to the key research area of computational sciences. Lie groups, representation theory and the newly opened area of enumerative geometry naturally connect to the key research area of arithmetic, algebra and discrete mathematics. Apart from

the connections provided by mathematical physics, many of the geometric topics studied by the researchers in this area are closely related to gravitational physics.

The main subjects of complex analysis include spaces of holomorphic functions of several variables, as well as CR geometry, which touches differential geometry. Close links exist with the theory of geometrical structures that are studied with methods of Lie theory. Newly added central subject areas come from geometrical analysis and contact geometry, where analytical methods and partial differential equations play a prominent role. Methods of functional analysis are of key relevance for questions of infinite-dimensional differential geometry and the non-linear theory of generalised functions with applications in differential geometry, which are studied intensively. This also leads to new insight into the structure and propagation of singularities, with applications in mathematical seismology and general relativity.

Further central areas in the field of mathematical physics include mathematical aspects of quantum mechanics and of wave phenomena. Particular importance is accorded to the study of the Schrödinger equation and applications to integrable wave equations (soliton equations), which are important for modelling a large number of physical phenomena (from water waves to data transmission in glass fibre cables). Apart from integrable models, which are valid in certain regimes, waves of large amplitude are of great interest. This leads to the study of free boundary value problems for the Euler equations in fluid mechanics. In addition to surface waves, currents under the surface, particularly with regard to the interaction between wave and current, are also of interest.

Computational sciences

The researchers in this area are united by their interest in the formulation of mathematical models and their computational realisation, especially in the context of cooperation with other disciplines. A specific focus is the development of the mathematical foundations for data science, which are investigated from various perspectives, particularly from the views of approximation theory, inverse problems, optimisation, numerical linear algebra and numerical mathematics.

This key research area enhances links, and thus cooperation opportunities, with the Faculty of Earth Sciences, Geography and Astronomy in the field of numerical simulations of structure formation in the universe, with the Faculty of Physics in the fields of highly correlated multi-particle systems and quantum information theory, and with the Faculty of Computer Science in the area of data science.

The field of applied partial differential equations has developed into a strong point of the Faculty. The activities in this area comprise modelling and (asymptotic and numerical) analysis, as well as implementation of numerical methods and the simulation of models of differential equations. This includes the development and analysis of new data-driven models for the numerical solving of partial differential equations based on low-rank tensor methods. The main applications relate to the fields of astrophysics, cell biology, continuum mechanics, electrodynamics, nonlinear materials, quantum physics, and semiconductor technology. Models of differential equations are also used for developing new imaging techniques in medicine, as well as for modelling questions of the social sciences and economic research.

The working groups in the area of optimisation study mathematical modelling, and the development and analysis of continuous-time methods, as well as numerical algorithms for solving high-dimensional optimisation problems. The applications currently examined primarily include areas such as discrete geometry, statistical data analysis, energy efficiency and renewable energy, image and signal processing, as well as machine learning.

Harmonic analysis looks back on a long tradition at the Faculty of Mathematics and is currently being pursued in many different forms, ranging from abstract harmonic analysis on locally compact groups to numerical and application-oriented harmonic analysis. The focuses here are on time-frequency methods and applications in signal processing, wireless communication, machine learning, and the analysis of biomedical data. The harmonic analysis in particular provides input to the mathematical analysis and the development of algorithms in the areas of machine learning, e.g. by means of deep-learning methods.

Arithmetic, algebra and discrete mathematics

This key research area comprises research groups in algebraic structures and group theory, arithmetic and number theory, algebraic geometry and commutative algebra, and combinatorics.

Group theory is pursued mainly from a geometric and analytic point of view. Here, algebraic and probabilistic techniques are combined, for example, with methods stemming from mathematical physics.

The Langlands programme is at the core of the research in the area of number theory. It is a continually expanding ensemble of highly profound conjectures and theorems that relate different

objects in arithmetic, combinatorics, geometry and analysis. It therefore has close links to algebraic geometry and combinatorics.

In algebraic geometry, the focus is on the resolution of singularities and approximation techniques in commutative algebra.

In the area of discrete mathematics, a broad spectrum of combinatorial themes is investigated and developed that ranges from algebraic combinatorics to analytic combinatorics and graph theory. Consequently, there are strong interrelations with algebra, number theory, and also with statistical physics.

4.11.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Algebra
- Algebra and Number Theory
- Applied Mathematics and Modelling
- Applied Mathematics with an Emphasis on Optimisation
- Biomathematics
- Combinatorics
- Complex Analysis
- Computational Science – Mathematical Modelling and Algorithmics in Application Areas
- Computer-Oriented Mathematics
- Data Science in Astrophysics (joint appointment with the Faculty of Earth Sciences, Geography and Astronomy)
- Differential Equations
- Discrete Mathematics with Special Emphasis on Combinatorics
- Dynamical Systems
- Financial Mathematics
- Global Analysis/Differential Geometry
- Harmonic Analysis
- Mathematical Logic
- Mathematical Logic Taking into Account the Foundations of Computer Science
- Mathematics
- Mathematics
- Mathematics
- Mathematics
- Mathematics
- Mathematics
- Mathematics – Applied Analysis, Mathematical Physics

- Mathematics and Biology (80 %; 20 % at the Centre for Molecular Biology)
- Mathematics with Special Emphasis on the Didactics of Mathematics and Computer Science (joint appointment with the Centre for Teacher Education)
- Numerics of Partial Differential Equations
- Partial Differential Equations
- Quantitative Modelling of Biological Networks (joint appointment with the Centre for Molecular Biology)
- Quantum Algorithms (joint appointment with the Faculty of Physics)
- Stochastics

4.11.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Algebraic Geometry
- Computational Medicine (joint appointment with the Medical University of Vienna, Faculty of Mathematics or Faculty of Computer Science depending on the advertising result)
- Dynamical Systems in Biomathematics

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Computational Partial Differential Equations

Time of appointment:

following vacancy of the Professorship of Differential Equations (presumably as of 1 October 2023)

Subject dedication of professorship:

Applied Analysis

Time of appointment:

following vacancy of the Professorship of Mathematics VI – Applied Analysis, Mathematical Physics (presumably as of 1 October 2025)

Future professorships subject to availability of funds

Subject dedication of professorship:

Analytic Number Theory

Subject dedication of professorship:

Mathematics for Climate Research

Subject dedication of professorship:

Stochastic Analysis

4.12 Faculty of Physics

4.12.1 Objectives

Research at the Faculty of Physics is characterised by a clear profile with regard to subjects and methodologies, and oriented towards excellence in all key areas. Its research achievements have received great acclaim from the international scientific community.

The Faculty's researchers primarily aim to acquire knowledge of fundamental problems in physics. However, in line with the University's innovation strategy, the Faculty is also open to application-oriented research and plays an active role in the establishment of additional Christian Doppler Laboratories and spin-off enterprises. Its cooperation with the Faculty of Mathematics, in the context of the Erwin Schrödinger International Institute for Mathematics and Physics (ESI) is of particular importance. The areas covered by the ESI, which has acquired a prestigious international reputation, include theoretical, experimental and computer-supported aspects of the sciences involved.

Students in the bachelor's programmes at the Faculty of Physics have access to comprehensive, sound education that encourages independent thought and action, and makes it possible for them to change to other fields of science or to professional life. The Faculty promotes the integration of students into current research at the earliest possible stage. Ensuring a high quality of teaching, particularly in the master's and doctoral programmes, is of particular importance to the Faculty. Its goal is to offer students a thorough education covering the entire field of physics, and to enable graduates to be excellently positioned in international research or in the private sector. Great importance is also attached to the quality of physics as a teaching subject.

4.12.2 Key Research Areas

The University of Vienna has defined a number of cross-faculty research specialisations that are visible at the international level and eligible for funding, and in which it is represented by excellent academics. The Faculty of Physics is prominently represented by the cross-faculty research specialisation of materials and the quantum level, which embraces several key research areas and includes a strong computational physics component. These key research areas are based on their members' research initiatives.

Quantum optics, quantum nanophysics and quantum information

The area of quantum optics, quantum nanophysics and quantum information investigates the foundations of quantum physics and its technological applications. Its experimental activities focus on preparing, controlling and detecting individual quantum objects and quantum-correlated ensembles of photons, atoms, complex molecules, nanoparticles and micro-oscillators. Quantum technologies such as quantum information processing and quantum-based sensors are of key relevance for possible applications. The theoretical work in this research area is oriented towards fundamental concepts of quantum physics, quantum statistics of many-body systems, quantum optics, as well as relativistic and non-relativistic quantum information. Inter-faculty research cooperation is of particular relevance, for instance research projects at the interface between quantum physics and gravitation, the Vienna Center for Quantum Science and Technology (VCQ), as well as the Quantum Technology Flagship Programme started by the EU, and the Erwin Schrödinger Center for Quantum Science and Technology (ESQ). In addition, national and international cooperation in the context of research programmes and industrial partnerships is also worthy of mention.

Condensed matter physics and materials science

The key research area of condensed matter physics and materials science comprises experimental, theoretical and computational research into nanostructured and microstructured as well as low-dimensional materials and soft matter. The development of new computational methods is combined with their application to numerous materials and processes of fundamental and technological interest. Its research focuses on innovative methods for solving the many-electron Schrödinger equation, as well as on improved statistical methods and coarse-graining methods for bridging length and time scales in complex solids and fluids.

The materials studied include classical atomic, molecular and colloidal solids, nanostructures, as well as liquids, biological systems and soft matter. A particular focus is the physical basis of novel low-dimensional materials. They are the basis for future innovative technologies and are, for instance, important for sensor technology, nano- and opto-electronics, as well as biotechnology. For their production, investigation and modification, state-of-the-art methods are applied and continually advanced, for instance microscopic and spectroscopic procedures as well as charge transport and scattering experiments. The overarching goal here is to produce and functionalise such advanced materials with

structural, electronic, magnetic, optical and transport properties that are tailored to specific requirements.

A large network of national and international cooperation projects in research programmes, as well as with industrial partners in the area of new materials, enables the implementation of application-oriented projects in addition to intensive basic research.

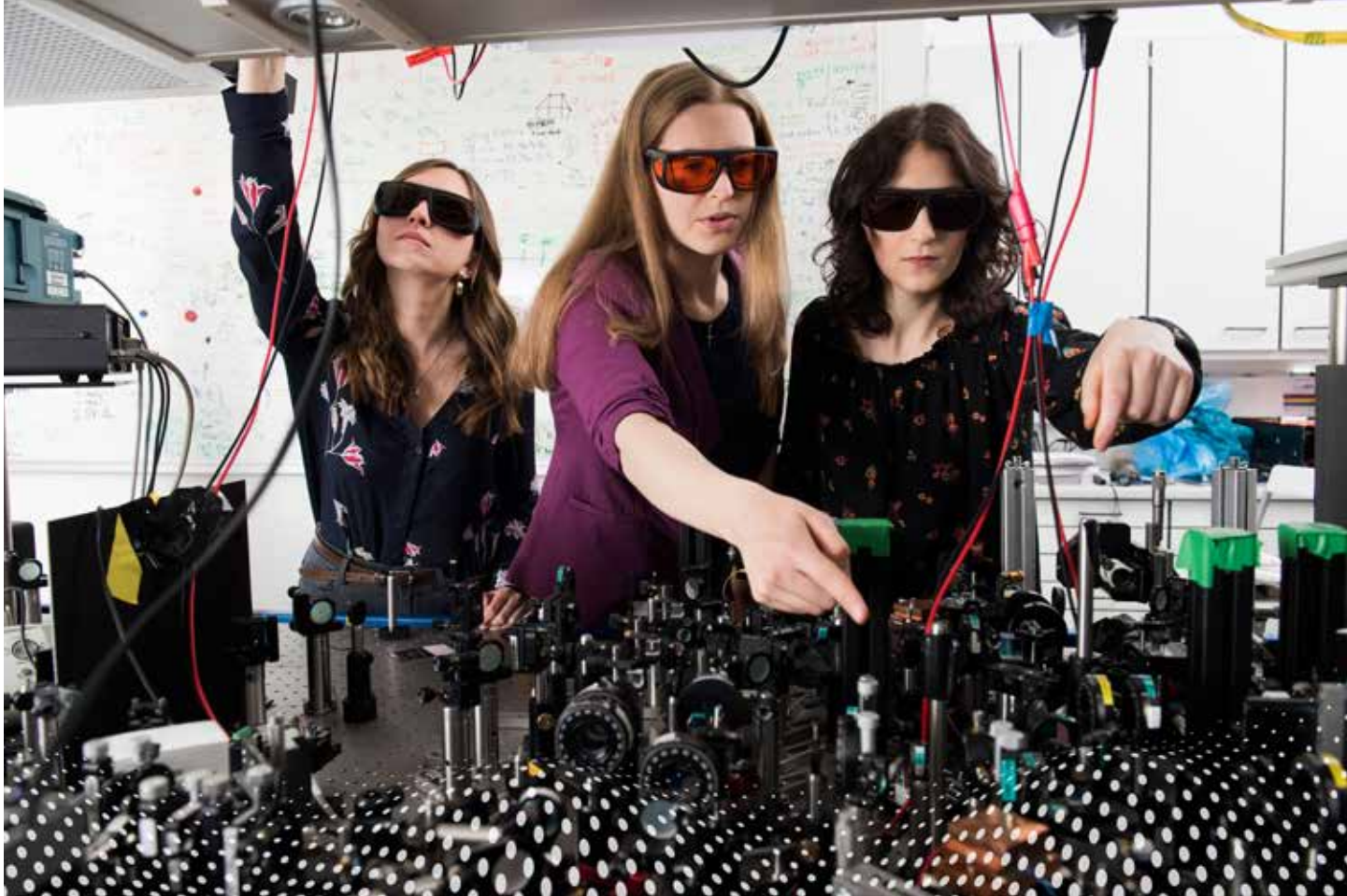
Particle physics, gravitational physics and mathematical physics

The key research area of particle physics, gravitational physics and mathematical physics examines the mathematical and phenomenological properties of matter and their interactions, as well as the spacetime structure. The fundamental interactions of electromagnetism, strong and weak interaction, as well as gravitation from the smallest to the largest measurable distances are studied. One focus is on theoretical models to enable high-precision predictions for collider experiments such as the Large Hadron Collider, and on the study of elementary particles such as the Higgs boson, dark matter, neutrinos and heavy quarks. These activities are a key element of international research in the area of high-energy physics, and are carried out in the context of international cooperation projects. In the context of general relativity, black holes and cosmological singularities, as well as theoretical aspects of gravitational waves and the development of the universe are examined. In addition, the mathematical foundations of fundamental interactions are studied, especially with regard to the unification of quantum field theory and gravitation, e.g. in the context of generalised theories of gravitation or string theory.

Physics and the environment

The key research area of physics and the environment conducts basic research into physics and explores application-oriented questions concerning natural or human-influenced environments. It studies phenomena in an extraordinarily wide range of length and timescales – for instance, the interaction of a small number of atoms in the femtosecond range, the formation and change of aerosol particles from the nanometre to the micrometre scale, as well as complex atmospheric and oceanic processes, on timescales ranging from days to centuries.

Lab experiments, as well as experiments near the ground and on aeroplanes, are complemented by modelling and simulation. Methodological and instrumental pioneering work enables simultaneous and high-resolution measurements in the entire aerosol-size range, as well as measurements of actinide isotopes in the attogram range. This research area operates, or



has access to, a number of research facilities of international standing – for instance, the Vienna Environmental Research Accelerator (VERA) for accelerator mass spectrometry, the CERN CLOUD chamber and research aeroplanes, e. g. of DLR and NASA.

Its research activities are important for providing answers to key societal challenges such as global climate change, health-related and technological topics, as well as transdisciplinary cooperation such as dating and tracer studies.

4.12.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Didactics of Physics (joint appointment with the Centre for Teacher Education)
- Experimental Quantum Optics
- Gravitational Physics
- Isotope Physics
- Low-Dimensional Transport and Nanotechnology
- Materials Physics
- Mathematical Physics
- Multi-Scale Computational Physics
- Particle Physics and Particle Astrophysics
- Quanta and Solids
- Quantum Algorithms (joint appointment with the Faculty of Mathematics)
- Quantum Foundations and Quantum Information Theory
- Quantum Information on the Nanoscale
- Quantum Materials Modelling
- Quantum Nanophysics
- Solid-State Physics

- Aerosol and Cluster Physics
- Aerosol and Cluster Physics
- Computational Material Discovery
- Computational Physics
- Computational Quantum Mechanics

4.12.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Experimental Soft Matter Physics

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Theory of Quantum Optics

Time of appointment:

funding via a vacant professorship at the Faculty (presumably as of 2021)

Subject dedication of professorship:

Experimental Quantum Physics

Time of appointment:

funding via a vacant professorship at the Faculty (presumably as of 2021)

Subject dedication of professorship:

Theoretical Gravitational Physics

Time of appointment:

following vacancy of the Professorship of Gravitational Physics (presumably as of 1 October 2024)

Subject dedication of professorship:

Experimental Astrophysics

(cooperation with the Faculty of Earth Sciences, Geography and Astronomy with regard to advertising and recruitment)

Time of appointment:

following vacancy of the Professorship of Isotope Physics (presumably as of 1 October 2024)

Future professorships subject to availability of funds

Subject dedication of professorship:

Theoretical Biophysics

(cooperation with the Centre for Molecular Biology with regard to advertising and recruitment)

Subject dedication of professorship:

Precision Measurements and Tests of Fundamental Physics

Subject dedication of professorship:

Experimental Design of 2D Quantum Materials

Subject dedication of professorship:

Dark Matter Theory and Physics Beyond the Standard Model

4.13 Faculty of Chemistry

4.13.1 Objectives

Chemistry is a core science that deals with the structure, synthesis and function of organic as well as inorganic nature, thereby reaching far into areas of life sciences and medicine. On this basis, it is also involved in the development of substances and materials in a broad sense. It contributes to the development of pharmaceutical drugs and medical devices, including the development of innovative materials to ensure the availability of raw materials and energy resources for our future, based on sustainable processes. Chemistry is thus of key economic and social relevance within the University.

The Faculty is committed to basic and application-oriented research, and consequently, emphasis is placed on the development of the key research areas of (i) bioanalysis and environmental analysis, (ii) biological and medicinal chemistry, (iii) functional and sustainable materials chemistry, (iv) computational chemistry and biomolecular simulation, (v) food chemistry and physiological chemistry, and (vi) synthesis and catalysis, as well as on comprehensive education in chemistry. Beyond that, chemistry is the prerequisite for a profound understanding of other disciplines in the natural and life sciences. In this context, the Faculty is responsible for the sound education of a large number of students in bachelor's programmes of related degree programmes.

There is a basic difference between the degree programme of the University of Vienna (degree programme in Chemistry) and that of the TU Wien (degree programme in Technical Chemistry): At the University of Vienna, the curricula at all levels are, both theoretically and practically, more strongly oriented towards basic science and methods, as well as the links between chemistry and the biosciences. In addition, the Faculty of Chemistry is particularly committed to the education of chemistry teachers in Austria.

During the bachelor's programmes, it makes sense to keep the degree programmes at the University of Vienna and the TU Wien separate, due to the total number of students and differences in orientation and technical equipment. During the master's programmes, however, it is possible to use helpful synergistic effects in a joint curriculum of materials science/materials chemistry. Here, students of the University of Vienna can profit from the technological orientation of TU Wien, while students from the latter benefit from the approaches that are promoted at the University of Vienna.

Cooperation with the University of Natural Resources and Life Sciences, Vienna is also relevant with regard to both science and teaching. Cooperation in the field of analysis, e.g. proteomics and metabolomics and the technological aspects of food chemistry, as well as intensive cooperation in the area of biomolecular simulation are particularly worthy of mention. These are areas from which the University of Vienna is benefiting, and in turn provides profound expertise in the synthetic and analytical areas. Bioactive compounds and innovative tumour therapeutics based on developments in, and results of, basic research at the University of Vienna have brought about interesting applications in the field of medicine, and have already led to extensive cooperation with the Medical University of Vienna and at the international level. The Joint Metabolome Facility, which is run together with the Medical University of Vienna, will permit better insight into the patients' metabolome and thus improve the interpretation of the course of diseases and the optimisation of treatment, particularly regarding chronic diseases such as cancer, diabetes and lipid metabolism disorders. The scientific alignment of research performed by the University of Vienna, TU Wien, the University of Natural Resources and Life Sciences, Vienna, as well as the Medical University of Vienna offers a significant potential for joint development.

The interdisciplinary cooperation with the Centre for Microbiology and Environmental Systems Science has been continued. Here researchers work at the interface of chemistry and microbiology, in the areas of microbiome research, environmental research, bioinformatics and antitumour metal compounds.

With regard to environmental sciences, the Faculty of Chemistry cooperates with the Centre for Microbiology and Environmental Systems Science, the Faculties of Physics, of Life Sciences, of Earth Sciences, Geography and Astronomy, and of Computer Science, as well as with the Centre for Molecular Biology.

Several core facilities have been established at the Faculty: the Mass Spectrometry Centre, the Centre for X-Ray Structure Analysis, the Multimodal Imaging Core Facility, the NMR Centre, as well as the inter-faculty Center for Nanostructure Research, which is jointly run by the Faculties of Chemistry and of Physics.

4.13.2 Key Research Areas

The key research areas have seen a dynamic further development. Recent examples of themes that could in future become key research areas include, for instance, the newly emerging fields of dynamic spectroscopy or bioinspired chemistry, in which sustainability aspects are also taken into account. This flexibility, which makes it possible to introduce new research areas as a basis for future key research areas, will be maintained in the future as well.

The following key research areas have been established:

Bioanalysis and environmental analysis

The strictly molecular approach pursued in chemistry has increasingly often been taken up by the sciences with a biological orientation, and permits numerous new insights into the functionality of biomolecules, their synthesis and decay, as well as their interactions. This enables the investigation of highly complex questions of chemistry, biology and pharmacology, which require high-performance analysis. The Faculty's international reputation in this area is based on many decades of research in the field of comprehensive and rapid analysis.

One focus is on coupling separation processes with analytical methods in order to determine different types of molecules, particularly with the aid of mass spectrometry. Due to the use of a variety of omics methods (metabolomics, lipidomics or proteomics) it is possible to identify thousands of components per individual sample, while specific analyses combine extremely high sensitivities with particularly precise measurements. The resulting highly comprehensive molecular screening of cell systems and other model systems thus enables the investigation of functional relationships, and requires both the advancement of instruments and novel methods of bioinformatics. The determination of marker molecules (nucleic acids, proteins, lipids, metabolites) and their quantification enables important conclusions regarding specific processes. The high sensitivity of modern mass spectrometry combined with highly selective reporter strategies also furthers the new research area of single-cell analyses. Both bioanalysis and environmental analysis are thus continually advancing the corresponding methods in order to enable a comprehensive determination of both chemical processes in the environment and the biological effects of chemical substances.



Biological and medicinal chemistry

This research area comprises the isolation, identification, synthesis and characterisation of complex natural products and active ingredients, from small bioactive compounds to biopolymers, as well as their modification and structure/function studies in organic, inorganic, biophysical, analytical and biological chemistry.

Important classes of compounds on which research is focusing include low-molecular coordination compounds and organometallic compounds, peptides, proteins and functionalised particles to be used as therapeutics and for diagnosis, and which have already been developed as far as the stage of clinical trial in patients. Specifically combined with tumour-targeting strategies and state-of-the-art methods for analysing distribution in tissues, innovative cancer treatment strategies are being developed here in close cooperation with the Medical University of Vienna. Further treatment-related areas of application include pain management, gastrointestinal diseases, autoimmune diseases and neurodegeneration.

New methods for the selective chemical modelling and synthesis of peptides and proteins permit molecular probes that would otherwise not be accessible. They are used for the analysis of disease-related processes in the areas of autoimmune diseases, neuro-degeneration and

the development of cancer at the molecular level. In addition, these methods can be used for designing completely synthetic molecules with properties similar to those of antibodies, for developing improved vaccines and for improving the absorption of therapeutics.

For basic structure/function studies, special amino acid precursors and components with specific isotopic labelling patterns and post-translational modifications are used, which are specifically incorporated into peptides and proteins. This makes structure studies by means of NMR and crystallography easier, and the functions of different proteins can be presented in atomic resolution. Developing improved conditions for crystallisation by using polyoxymetalates as crystallisation additives constitutes a particular link between biological and inorganic chemistry and enables the examination of plant metalloproteins. The development of more sensitive and faster NMR analysis methods opens up new ways of understanding physiological processes such as biomineralisation and protein-protein interactions.

Functional and sustainable materials chemistry

Functional materials are an essential basis of our modern industrial society, particularly in areas of great social significance such as the environment, mobility, electronics, medicine

and the supply of energy and raw materials. In view of these challenges, the Faculty of Chemistry conducts basic and application-oriented research on polymers, composites, as well as ceramic, metallic, semiconductor and molecular materials. What is relevant here is specific structuring, starting from a variety of basic materials regarding their functionality, with a particular focus on thermoelectric, catalytic and mechanical properties. Special importance is also placed on the efficient use of the starting materials for obtaining the desired functional final products, while avoiding waste, minimising the need for energy and using renewable raw materials. For this purpose, manifold synthesis strategies (bottom-up, top-down, catalysed and non-catalysed) and characterisation methods are applied.

Research in this area includes studies of the synthesis of solid and soft materials and their components. These materials can be dense or porous, and with structures ranging from sub-nanometre sizes to macroscopic dimensions. What is essential is the fundamental understanding of material properties and interactions within them and at interfaces, as well as their environment.

In addition to the determination of physical and chemical as well as thermodynamic properties of materials, their potential application is a further strong driver of the Faculty's research activities, which range from innovative and renewable (starting) materials to catalysis and molecular identification. Consequently, myriad links to other key research areas at the Faculty and beyond are apparent.

Computational chemistry and biomolecular simulation

Computational simulation has meanwhile become a well-established method of modern chemistry, with manifold applications in all its fields. This key research area regards itself as both an independent research field with its own methods and applications, and thus as a field of leading-edge research in its own right, and as an area complementing and supporting the experimental disciplines. The current developments in the areas of big data and artificial intelligence and, in the latter, particularly regarding machine learning, have opened up new perspectives and research areas.

Quantum chemistry and molecular reaction dynamics are applied to study the properties of substances and materials, as well as their photochemistry. In order to obtain a better understanding of the structures, spectroscopic data and reactivity of molecules, programme packages of quantum chemistry are applied, and further developed in cooperation with international colleagues. The use of high-precision

methods to calculate electronic structures, and the development of new methods in the area of molecular reaction dynamics, as well as links between the two areas, are aimed at obtaining fundamental insights into chemical processes and structure-function relationships, and at predicting them in quantitative terms, in molecules, biological systems and materials. Regarding methodology, this is complemented by the use of machine learning algorithms in questions of reaction dynamics.

Biomolecular simulation studies the structure, dynamics and energetics of biopolymers, and thus enables the interpretation and prediction of macroscopic properties at atomic resolution. Specific attention is being paid to non-aqueous solvents (e.g. ionic liquids), as well as the prediction of binding affinities (free energy calculations), with applications in the area of pharmaceutical research. As well as additive force fields, both polarisable force fields and hybrid descriptions are used, and the interactions are described in hybrid terms of quantum chemistry and molecular mechanics, and the methodological basis for this is developed (further).

Modelling the structures of biopolymers and their functions in cellular networks is another focus of research. In particular, secondary and tertiary structures of RNA molecules are predicted using modern high-throughput data, and methods for designing functional RNA molecules are developed. Methods and algorithms of biochemistry and cheminformatics are developed and used for analysing different types of network such as reaction, interaction or gene regulatory networks. The development of new algorithms benefits from synergies with the Faculty of Computer Science.

Food chemistry and physiological chemistry

Basic and application-oriented research and teaching in the areas of food chemistry and physiological chemistry concentrate on identifying functional food ingredients, and on exploring molecular mechanisms of these components, as well as their relevance for food safety.

Based on these focuses, new synergies concerning food safety, toxicological assessment and biofunctionality can develop, for instance, with TU Wien, the University of Natural Resources and Life Sciences, Vienna, the Medical University of Vienna, as well as numerous cooperation partners in private business. The combined expertise of food chemistry and food toxicology – which, in Austria, is available only at this location – enables cooperation particularly regarding the interference of foods and food ingredients with chemotherapeutics, as well as contaminant research and the topical fields of toxicological

assessment of chemical mixtures and exposome research. Synergy in the area of physiological chemistry exists, and is developing, with regard to aspects of health and nutritional physiology in connection with flavour-active and aroma-active compounds, as well as lipid oxidation products.

With respect to food safety, food chemistry examines the cellular mechanisms of action of a wide variety of ingredients (bioactive components, contaminants, nanoparticles) in the human digestive system, using a wide range of biochemical, molecular-biological, toxicological, biophysical and analytical techniques, which perfectly complement each other in an innovative approach to systems toxicology.

Physiological chemistry focuses on the identification and characterisation of bioactive food ingredients as isolated compounds and as compounds in food matrices, giving special consideration to food processing. The proof of bioactivity, as well as the exploration of its basic mechanisms, is established via studies of isolated cells and within the framework of human intervention studies using various food matrices, for which translational approaches are also pursued. The applied techniques record the bioavailability of the target compounds and their bioactivities at the gene-regulatory levels, at the levels of mRNA expression and protein regulation, and their impacts on metabolic profiles.

The research activities in the areas of food chemistry, food toxicology and physiological chemistry within the University of Vienna also enable perfect cooperative links within the Faculty of Chemistry and with the Faculty of Life Sciences (nutritional sciences, pharmacy), the Faculty of Physics, and the Centre for Microbiology and Environmental Systems Science. In addition, strong national and international cooperation schemes with universities and partners in the business world are being further intensified.

Synthesis and catalysis

Chemistry is a science that has continually created its own objects of research. This specific property is used constantly, both in nature and in the modern chemical industry, and is based on the deliberate combination of atoms by means of chemical synthesis.

The researchers at the Faculty of Chemistry specifically investigate the synthesis and chemical reactivity of bioactive molecules, which also includes the development of new methods, new covalent and non-covalent functional architectures, customised chemical transformations, as well as the efficient optimisation of existing chemical processes.

Specific importance is placed on the synthesis, modification and structural analysis of natural products such as hydrocarbons, macrolides, peptides, proteins and artificial π -conjugated macromolecules. This permits applications of social relevance in industry, for instance in the life sciences and medicine, as well as for energy transformation. As many of these compounds are chiral, stereo-selective methods of synthesis have to be developed which ensure a precise three-dimensional arrangement of the molecule's atoms. In addition, atom-efficient chemical reactions are used in these systems in order to find ecologically-enhanced methods of synthesis. The catalysis of chemical reactions plays an important role in this context, as many chemical transformations would not be possible without the use of catalysts. New catalytic transformations can replace conventional reaction sequences over several stages, and the ensuing waste materials (reagents, solvents, by-products) can often be reduced considerably.

4.13.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. In addition to the professorships listed, several professors from the Centre for Microbiology and Environmental Systems Science maintain links with the Faculty of Chemistry. These professors with 'bridging functions' are not enumerated here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Analytical Chemistry
- Analytical Chemistry
- Biochemical Modelling (joint appointment with the Faculty of Computer Science)
- Biofunctionality of Food
- Biological Chemistry
- Biophysical Chemistry
- Chemical Bioinformatics Network Analysis
- Chemical Catalysis
- Computational Chemistry – Theoretical Chemistry/Scientific Computing
- Computational Structural Biology
- Didactics of Chemistry (joint appointment with the Centre for Teacher Education)
- Environmental Chemistry
- Food Chemistry
- Inorganic Chemistry
- Inorganic Chemistry
- Microbial Biochemistry



- Organic Chemistry
- Organic Structural Chemistry
- Organic Synthesis: Natural Products, Methods
- Physical Chemistry
- Separation Processes and Bioanalytics
- Synthetic Materials Chemistry

4.13.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Emerging Pollutants

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Inorganic Chemistry

Time of appointment:

following vacancy of the Professorship of Inorganic Chemistry (presumably as of 1 October 2024)

Subject dedication of professorship:

Food Chemistry

Time of appointment:

following vacancy of the Professorship of Food Chemistry (presumably as of 1 October 2026)

Future professorships subject to availability of funds

Subject dedication of professorship:

Green Chemistry

Subject dedication of professorship:

Computational Mass Spectroscopy

Subject dedication of professorship:

Didactics of Chemistry

(cooperation with the Centre for Teacher Education with regard to advertising and recruitment)

4.14 Faculty of Earth Sciences, Geography and Astronomy

4.14.1 Objectives

The Faculty's goal is to understand the cosmos, Earth, the environment and the anthroposphere to provide a unique and informed view on the sustainability of our planet. The spirit of the Faculty is one of exploration: how the universe generates planets like the Earth, how the Earth works in its various spheres (geosphere, atmosphere, hydrosphere, biosphere and anthroposphere), how the environment is formed on the Earth's surface, and how it influences and is influenced by humankind.

In this regard, the Faculty of Earth Sciences, Geography and Astronomy focuses on fundamental human existence questions. How did the universe come about? Where does the Earth come from, and are there other, similar planets? How have the Earth and the climate evolved to their present state, and can their future be predicted? How was life able to develop on our planet, and how has it evolved? How have the dynamics of the environment changed over the past few centuries? What is humankind's impact on the planet, and is it sustainable? Answering these questions is the key to meeting the grand societal challenges and the United Nations' Sustainable Development Goals: climate change, water resources, biodiversity, migration and population dynamics, environmental change, sustainable cities and communities, the responsible use of resources, and the resilience of ecosystems. The Faculty investigates and teaches these themes at an interdisciplinary level with the aid of well-established natural and social sciences methods and using the rapidly advancing opportunities provided by analytical instrumentation and computer science.

As a community of academics studying the sustainability of 'Spaceship Earth', the Faculty inevitably has a broad basis. It is a place where natural sciences and social sciences meet in inter-, intra- and transdisciplinary ways. Its disciplines encompass areas firmly positioned in physics, such as astrophysics, geophysics and meteorology, or geoscience disciplines such as geology, mineralogy, geochemistry or palaeontology, as well as the disciplines of physical geography and human geography.

The Faculty pursues research at a high level to ensure the high international visibility of its disciplines. It is involved in top-level international cooperation and participates actively in major international programmes such as the European Southern Observatory (ESO), the European

Space Agency (ESA), the Copernicus European Earth Observation Programme, research on synchrotron radiation facilities, the International Continental Scientific Drilling Program (ICDP), the International Ocean Discovery Program (IODP) and the Long-Term Ecological Research (LTER) network. In addition to international collaboration, the Faculty sets a high value on cooperation within Austria, in and around Vienna, with institutions such as the Austrian meteorological and geophysical service ZAMG, the Geological Survey of Austria, the Natural History Museum Vienna, and other universities. In addition, intensive contacts have been established with various public administration agencies. Synergies at the national level are oriented towards teaching and research and efficient use of expensive infrastructures, some of which are unique in Austria.

4.14.2 Thematic Areas and Key Research Areas

The research areas covered by the Faculty's academics are grouped in four thematic areas: cosmos, Earth, environment and anthroposphere. These thematic areas overlap extensively and underpin the Faculty's mission, namely understanding the cosmos, Earth, and society to ensure the sustainability of our planet. These areas go beyond the Faculty and are jointly addressed together with other faculties to define a wide range of overlapping themes following the Faculty's mission.

The thematic area of cosmos aims to understand the origin and evolution of stars, galaxies and planets like the Earth. Using state-of-the-art observational facilities across the world and in space and high-performance computers, this thematic area quantifies the physical and chemical processes involved in transforming pristine gas into stars, galaxies and rocky planets like Earth. The search for our cosmic ancestry is the key to understanding Earth as a member of a planetary system orbiting a star, orbiting a galaxy, interacting with the interplanetary and interstellar medium, and exposed to cosmic events potentially affecting life on our planet.

The aim of the thematic area of Earth is to gain a deeper understanding of how planet Earth works. The focuses are on investigating the causes and evolution of the Earth's structure and dynamics in time and space, identifying long-term and short-term processes that have shaped the planet, studying geodynamics to explore their relevant relationships and changes, analysing connections with biological processes and, in collaboration with the Faculty of Life Sciences, tracing the evolutionary history of ecosystems and organisms.

The research in the thematic area of environment aims to better understand environmental processes and their interactions and to develop new methods that help assess the present situation and predict our environment's future development. Its objective is to survey and forecast the dynamics of atmospheric above-surface and subsurface processes in the complex human-environment relationship. The role of human beings, how environmental processes and domains influence them and affect their environment is of particular interest within this context. Therefore, questions such as the sustainable preservation of the basis of life and human civilisation and air pollution and climate are addressed.

The thematic area of anthroposphere aims to understand how human activity taking place in space and time shapes our planet's environment while being, in turn, influenced by the environment. At the Faculty of Earth Sciences, Geography and Astronomy, the social, economic, demographic, technological, and ecological changes which are also examined at other faculties, are studied particularly concerning their patterns and dynamics in space at various scales (local and global, North and South, urban and rural), including in terms of the interactions between the individual disciplines (e.g. scarcity of water as a driver of migration). This thematic area seeks to understand the socio-spatial dimension of these changes – such as population dynamics, migration processes or disruptive innovation and economic restructuring, and to explore their socio-economic and ecological implications in various contexts of time and space.

Planets, stars and galaxies as components of the universe

This key research area focuses on the physical parameters of galaxies, stars, planets, gas and dust, using the observation of light over the entire electromagnetic spectrum, with large ground-based telescopes such as those of the European Southern Observatory (ESO) as well as high-performance space-based satellites of ESA and NASA. The combination of observation, theory, numerical data and instrumental applications provides the basis for fundamental insights into key processes in the universe, including the formation of galaxies, stars, and planets and the conditions for the origin of life.

Reconstruction of geodynamic processes

This key research area examines the processes taking place in Earth's interior and its surface, such as orogeny, magmatism, volcanism, metamorphism, meteorite impacts and erosion. These processes are active over geological time spans and have long-term effects on the evolution of our planet. The goal is to further acquire a

profound understanding of the structure and the geological evolution of planet Earth both at the global level (e.g. plate tectonic processes, formation and erosion of alpine-type mountains) and at the local level, particularly regarding the assessment of specific risks such as earthquakes and meteorite impacts. Industrial applications are oriented towards the origin and fate of natural resources such as groundwater, oil and gas.

Geomaterials

In this key research area, the physical and chemical properties of minerals, rocks, glass, melts, and fluids and their behaviour in the context of geological and technological processes are studied. This is aimed at a bottom-up understanding of macroscopic material properties from the nanoscale to mesoscale research on their atomic arrangements, interfaces, microstructures and chemical compositions, combined with theoretical models. Geomaterials research supplies crystallographic, physical and chemical material data needed for developing quantitative geological models. Thus, it is of key relevance for a profound understanding of the processes underlying the evolution of the solid Earth and other planets. This area's industrial applications are primarily oriented towards the development and design of new mineral-based products such as construction materials, refractories or functional ceramics.

Atmosphere, weather and climate

The atmosphere is an integral part of the Earth system and thus strongly interacts with the oceans, the hydrosphere, the cryosphere, the biosphere, the geosphere, and the anthroposphere. Atmospheric processes are studied by synthesising information from observational data and state-of-the-art models. Specific attention is paid to transport processes into the atmosphere, the risks of air pollution, weather forecasts and climate research. The pertinent research subjects include interactions with the other spheres, for instance by using atmospheric studies to assess anthropogenic emission and natural carbon fluxes, or by using data assimilation to improve precipitation forecasts.

Evolutionary mechanisms and ecosystems in space and time

This key research area studies the diversity of past life and the functional principles of evolution and ecosystems. Understanding evolutionary and ecological processes in the geological past is essential for making sound predictions about life development. To comprehend evolution and ecosystems, the topics and methodologies of palaeontology and geobiology are linked with those of evolutionary biology, molecular biology and ecology. The aim is to gain a better

insight into the evolutionary history of ecosystems and organisms using hypothesis-based analytical and quantitative methods and provide historical bases for protecting species and the environment.

Environmental processes and natural risks

As a system, planet Earth is subject to dynamic change, which has influenced, and will continue to influence, the natural environment and thus society. Identifying and understanding the environmental factors that determined changes in the past provides a basis for estimating the future environmental impacts on social activities and assessing hazard potentials, threats and risks. This key research area aims to better understand past and recent environmental processes to improve the surveying and forecasting of the dynamics of surface processes in the complex human-environment system. It also includes questions of the sustainable preservation of the basis for human life.

Population and socio-economy

In this key research area, the focus is on population development and economic dynamics in various spaces. It examines socio-economic development processes in different spaces and their determinants against the background

of predominant social, economic, ecological, technological, demographic and cultural change. The core issues are studies on migration processes with respect to environmental change and local-global development contexts, influencing factors and mechanisms of innovation-based socio-economic and socio-ecological transformation processes in different spaces, and their implications for regional and urban development, as well as the theoretical and methodological advancement of subject didactics and models for teaching Geography and Economics. This research area is not limited to the theory-driven analysis of space-related patterns and processes. It includes identifying challenges regarding the transformation towards sustainability from a geographical perspective and possible solutions through geo-oriented education, planning and policies.

4.14.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any



future subject dedication of professorships, nor the ones dealt with in the following section.

- Astronomy, Satellite Astronomy and Experimental Astronomy
- Data Science in Astrophysics (joint appointment with the Faculty of Mathematics)
- Economic Geography
- Galaxy Formation in the Early Universe
- General Meteorology
- Geodynamics and General Geology
- Geoecology
- Geology
- Geophysics
- Impact Research and Planetary Geology
- Meteorology
- Mineralogy and Crystallography
- Mineralogy and Spectroscopy
- Observational Astrophysics
- Palaeobiology with Special Emphasis on Vertebrate Palaeontology
- Palaeoecosystems
- Palaeontology
- Physical Geography
- Population Geography and Demography
- Sedimentology
- Stellar Astrophysics
- Theoretical and Experimental Petrology
- Theoretical Extragalactic Astrophysics
- Theoretical Meteorology
- Urban Studies

4.14.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Cartography and Geoinformation Science
- Climate Science
- Spatial Research and Spatial Planning

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:
Geochemistry and Cosmochemistry

Time of appointment:
funding via vacant academic positions at the Faculty (presumably as of 1 October 2024)

Subject dedication of professorship:
Seismology

Time of appointment:
following vacancy of the Professorship of Geophysics (presumably as of 1 October 2026)

Subject dedication of professorship:
Earth System Science

Time of appointment:
funding via vacant academic positions at the Faculty (presumably as of 1 October 2026)

Subject dedication of professorship:
Planetary Science

Time of appointment:
following vacancy of the Professorship of Astronomy, Satellite Astronomy and Experimental Astronomy (presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship:
Planetary Geology

Subject dedication of professorship:
Digital Geophysics

Subject dedication of professorship:
Hydrogeography

4.15 Faculty of Life Sciences

4.15.1 Objectives

Research and teaching at the Faculty of Life Sciences focus on the fundamental understanding of biological systems, their organisation and evolution. Curiosity-driven basic research in biology, pharmacy and nutritional sciences provides the basis for application-oriented research to find sustainable solutions to global challenges and problems of the society.

Living organisms are embedded in complex networks with other organisms in a continuously changing environment. A profound understanding of ecology and evolution, biodiversity, the function and conservation of biological systems, as well as the interactions of food and drugs, increasingly call for systems biology approaches. These approaches involve the generation of big datasets, as well as their analyses. Based on the knowledge thus obtained, the Faculty addresses the multifaceted challenges of the future, such as the complex causes of environmental change, aspects of ecologisation in our society, as well as an eco-friendly diet, and the health of an ageing population.

The Faculty of Life Sciences fosters interdisciplinary research within the Faculty and actively aims to further intensify the interdepartmental use of research equipment and instrumentation that is currently available and will be acquired in the future. To address the major scientific challenges in the life sciences, interdisciplinary research within the Faculty and between faculties is being intensified.

The Faculty aims to intensify its collaboration with other national and international research institutions and to further strengthen the position of the University of Vienna in life sciences in the national and international research arena. A large part of the Faculty will relocate to the vicinity of the Vienna Biocenter Campus. This will further enhance the synergy and collaborative academic interaction with groups from the Max Perutz Labs as well as non-university research centres at the Vienna Biocenter Campus, the Institute of Molecular Pathology (IMP), the Institute of Molecular Biotechnology (IMBA) and the Gregor-Mendel Institute of Molecular Plant Biology (GMI), and also intensify the joint use of large instruments and core facilities at the Vienna Biocenter, particularly through the Vienna Biocenter Core Facilities (VBCF).

The Core Facility Botanical Garden, with its collection of living plants and related resources, provides key foundations of biodiversity-related research and teaching at the University of Vienna. In addition, the Botanical Garden is

a competence centre for national and global strategies to preserve biodiversity. With its post-graduate and advanced training activities, the Botanical Garden also plays an essential role in society, economy and policy matters beyond the university framework.

The great societal relevance of research and teaching at the Faculty of Life Sciences is reflected in its five field stations (the Konrad Lorenz Research Center in Grünau, the Landskron Monkey Mountain, the Haidlhof station, WasserCluster Lunz, and the La Gamba tropical field station in Costa Rica). These facilities enable on-site research on animals kept under almost natural conditions and serve as platforms for interaction with the University of Veterinary Medicine, Vienna, the University of Natural Resources and Life Sciences, Vienna, and the Danube University Krems. The La Gamba tropical field station provides manifold opportunities for investigating and teaching the functions of the rainforest ecosystem and questions of biodiversity. Combined with the activities of the Rainforest of the Austrians association, the station represents a flagship project for the conservation of the rainforest and its biodiversity.

Many academics at the Faculty conduct scientific work that is oriented towards the research agenda of the European Research Area. They participate in international research programmes such as the Innovative Medicines Initiative, Future Earth, as well as massive sequencing programmes and systems biology projects to attract additional third-party funding from national and international sources.

Furthermore, the researchers at the Faculty significantly contribute to the academic input and evaluation of (inter)national biodiversity policies (IPBES, Convention on Biological Diversity – CBD, national biodiversity strategy). The University of Vienna thus plays an important role in devising and implementing the evidence-based protection of biodiversity.

4.15.2 Key Research Areas

One of the key strengths of the Faculty of Life Sciences is the wide range of academic areas it covers. This breadth provides the basis for international top-level research, which is reflected in prestigious academic prizes awarded to researchers at the Faculty. In a field characterised by highly dynamic development, new research areas are quickly opened up, while existing strengths are consolidated. This approach is also represented in the key research areas at the Faculty of Life Sciences.

Anthropogenic Evolution

Even though human beings and mammals share a large proportion of biological traits, the cumulative development of technology, language and culture has led to fundamental changes in our relationships to the environment, to other living beings, and to ourselves. This has influenced, and will continue to influence, how human beings have evolved in the ecological niche they have, to a large part, created themselves. This key research area focuses on biocultural evolutionary dynamics within the Homo genus, including humanity's key role in the Anthropocene, by studying the biology and behaviour of human beings in a broad context. This approach includes both theoretical and empirical examinations of how environmental changes as well as socio-cultural and technological transitions have influenced, and will continue to influence, the biology, biography, and health of human beings and other organisms. This research comprises, for instance, the evolutionary interrelations of genes and culture, with the inclusion of palaeoanthropological and archaeological data, and using genomic, medical, demographic, behaviour-related and socioeconomic sources.

Biomolecules for a healthy lifespan

Our disability-free life expectancy is considerably shorter than general life expectancy. So far, measures aiming to increase the lifespan spent in good health have mostly been limited to adapting one's lifestyle. The effects of biomolecules of the primary and secondary metabolisms – which are either endogenously produced by the organism itself, or exogenously originating – on health and age-related physiological changes have not yet been studied to a sufficient degree.

The goals of the key research area of biomolecules for a healthy lifespan are thus oriented towards (i) understanding the modes of action of biomolecules and natural products of pharmaceutical relevance in health-related biological processes at the molecular, cellular and organismal levels, (ii) examining their influence on the number of years spent in good health, and (iii) identifying new biologically active natural products and their targets. The results will help to characterise biomolecules which have a positive effect on life expectancy and possibly on the number of years in good health. Additionally, this research will help to discover the mechanisms by which these biomolecules act. This topic is being discussed as a central research area within the new Horizon Europe programme.

Cognition, behaviour and neuroscience

This key research area studies the neuronal, hormonal and cognitive bases of behaviour. Its strengths derive from a comparative approach encompassing numerous model organisms, and a variety of research approaches that study questions ranging from the development and function of neuronal circuits to animal behaviour in social groups. This research aims to investigate the interplay between genetic, physiological and environmental factors that significantly influence the behaviour and cognition of animals, as well as the evolution of behaviour. This includes the examination of the cellular processes that lead to the development and functional information processing of neuronal circuits – including their plastic modulation – as well as complex social behavioural interactions, such as cooperation, communication and coping with stress.

The goals in this key research area include strengthening the cognitive and behavioural sciences as well as neuroscience, and intensifying the academic interactions between neuroscience, cognition, pharmacy and the nutritional sciences. The activities in the context of this key research area contribute to enhancing inter-faculty collaboration and to establishing cooperation with relevant research groups in and around Vienna (IMP Research Institute of Molecular Pathology, IMBA Institute of Molecular Biotechnology and IST Institute of Science and Technology Austria).

Computational life sciences

This key research area coordinates the numerous activities at the Faculty that focus on applying and developing information technologies in the life sciences. In addition to forming topic-related clusters, this key research area is aimed at the interdisciplinary establishment of new methods in the fields of pharmacoinformatics, in-silico metabolomics, proteomics and bioinformatics, genomic evolution, sequence-function relationships, multi-omics methods, machine learning, deep learning and artificial intelligence, as well as structural and systems biology. Particular emphasis is laid on processing high-throughput biological data, the development of mathematical methods for modelling biological and biomolecular systems, large-scale metagenome analyses, computational drug design, molecular informatics, as well as data integration and data mining.

This key research area cooperates closely with other centres and faculties, the Austrian Academy of Sciences and the Max Perutz Labs. The move to the new location at the Vienna Biocenter Campus will further intensify the existing cooperation with the Center for Integrative Bioinformatics Vienna (CIBIV).



Environmental change ecology, biodiversity and sustainability

Human beings are degrading natural ecosystems and endangering their biodiversity. According to recent estimates, one million species will become extinct. The consequences that such an enormous extinction will have for essential ecosystem services can hardly be foreseen, but will potentially be massive. Research in this area investigates how climate change and changes in land use, use and overuse of the oceans, biological invasions and environmental pollution influence the functions of terrestrial, marine and limnic ecosystems, and how these changes impact the taxonomical, functional and phylogenetic diversity at all levels of biological organisation, from genes to landscapes.

Researchers in this area further work on topics related to systems ecology and agroecology, and aim to intensify the study of the biogenic production of greenhouse gases and plastics, as well as of the biological accumulation of heavy metals, biocides and pharmaceutical substances in terrestrial and aquatic food chains. The range of methodologies used by the research teams in this area include technologies of molecular biology, ecophysiology, biogeochemistry, and ecological genomics, as well as social ecology and macroecology, and comprise statistical and mathematical modelling approaches. Research in this field is aimed at improving the understanding of ecosystemic processes of change and their connection with the extinction of species. This understanding provides a basis for effective conservation and restoration measures. In addition, this research area endeavours to raise awareness, among students and the general public, of the current biodiversity crisis.

Green planet – from genes to ecosystems

Plants are the basis of life on our ‘green planet’ and they are important partners of human beings in the ‘ecosystem of Earth’. Climate change, scarcity of resources, the extinction of species, food for the world’s population, and the increasing importance of a plant-based diet are a few examples of the current societal challenges that underline the key relevance of the plant sciences. The future of our planet, and of humankind, will to a great extent depend on our knowledge about the evolution of plant diversity and its further development in the Anthropocene.

Science in this key research area wants to find answers to the current threats to plant diversity, and at the same time open up new, sustainable ways of using plants to the benefit of humankind. Biodiversity research in general, and studies on natural genetic diversity in particular, are of great relevance in this field. This key research area integrates transdisciplinary approaches ranging from the subcellular level to individual organisms, populations, species and communities, and finally entire ecosystems (from genes to ecosystems). In order to answer the pressing questions outlined, approaches of molecular genetics, cell physiology, ecological and evolutionary genomics, transcriptomics, proteomics, metabolomics, phylogenetics, ecophysiology, morphology, population biology and plant society research are combined with syn-, macro-, and evolutionary ecology.

Interactions and evolution of organisms

Evolutionary change at the molecular, cellular and morphological levels is based on an organism’s inherent capacity to generate hereditary (genetic and epigenetic) variations and on its interaction with its biotic and abiotic environment. This key research area, therefore, focuses on those aspects of evolutionary processes that influence the diversification and plasticity of organisms (e.g. interorganismal interactions between multicellular eukaryotes and microbes, the genetic and epigenetic basis for morphological and developmental complexity). The researchers study the question as to how cell and tissue types, as well as morphological, physiological and ecological traits, and interactions within and between organisms, develop and lead to innovation, transitions and radiation. The methodological approaches adopted in this area include molecular and single-cell technologies, omics-based, morphological and biomathematical methods, along with 3D and 4D imaging technologies and field-based as well as lab-based approaches. The integration of theoretical and experimental approaches at the system level allows for more comprehensive insights

into evolution, as well as into the interactions between organisms and their complexity. Here, research covers a great variety of microbial, plant and animal systems to explore genetic functions, developmental and morphological signalling pathways, as well as organismal interactions at multiple stages, which represent the great taxonomical diversity on planet Earth.

Innovation in drug research

The pharmaceutical sciences at the Faculty of Life Sciences of the University of Vienna have great expertise regarding modern research into, and development of, active substances. This expertise is being maintained and further expanded in cooperation with national and international academic institutions, as well as life science enterprises. Based on the development and application of innovative platform technologies, the aim here is early-stage research and the development of pharmaceutical drugs in the areas of chemotherapeutics, neuroscience and metabolic disease, and encompasses fields such as computational molecular design, research into natural products, identification of molecular modes of action, molecular imaging, formulation, quality control, nanomedicine and clinical pharmacy. The integration of this research area into the Faculty of Life Sciences with its well-established key research areas (biomolecules for a healthy lifespan, computational life sciences, and cognition, behaviour and neuroscience) places it at the central interface between chemistry, molecular biology (Max Perutz Labs) and medicine.

Innovation in pharmaceutical research represents the basis of, and a great opportunity for, further fruitful translational research in the pharmaceutical field, since companies active in biomedical research are increasingly deciding against carrying out preclinical early-stage research themselves and are instead collaborating with academic institutions to implement programmes for reaching new goals.

4.15.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Animal Physiology with Focus on Ornithology (joint appointment with the University of Veterinary Medicine, Vienna)
- Anthropology
- Cognitive Ethology
- Developmental Biology of Animals
- Didactics of Biology (joint appointment with the Centre for Teacher Education)
- Dietetics and Food Quality
- Ecogenetics
- Evolutionary Cognition Biology
- Limnology
- Marine Biology
- Molecular and Cellular Neurobiology
- Molecular Drug Targeting (90 %: 10 % at the Centre for Molecular Biology)
- Molecular Plant Physiology
- Morphology of Animals
- Neurobiology
- Nutritional Physiology/Molecular Nutrition
- Nutritional Sciences (Special Human Nutrition)
- Pharmaceutical Biotechnology
- Pharmaceutical Chemistry
- Pharmaceutical Sciences
- Pharmaceutical Technology and Biopharmacy
- Pharmacognosy
- Pharmacognosy (Pharmaceutical Biology)
- Pharmacoinformatics
- Pharmacology and Toxicology
- Population Ecology
- Structural Botany
- Theoretical Evolutionary Biology
- Vegetation Science
- Zoology and Marine Biology

4.15.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Neuroscientific Foundations of Human-Animal Interaction (joint appointment with the University of Veterinary Medicine, Vienna)
- Plant Systematics and Evolutionary Research
- Public Health Nutrition (joint appointment with the Medical University of Vienna)
- Sports Nutrition (joint appointment with the Centre for Sport Science and University Sports)

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Marine Biology

Time of appointment:

following vacancy of the Professorship of Marine Biology (presumably as of 1 October 2023)

Subject dedication of professorship:

Animal Biodiversity

Time of appointment:

following vacancy of the Professorship of Population Ecology (presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship:

Theoretical Ecology/Ecological Modelling

Subject dedication of professorship:

Functional Morphology and Bionics

Subject dedication of professorship:

Behavioural Neuroscience

Subject dedication of professorship:

Prevention of Non-Communicable Diseases

4.Z1 Centre for Translation Studies

4.Z1.1 Objectives

The Centre aims to serve as an internationally reputed centre of excellence for translation studies and a key point of call for questions of translation and other forms of transcultural communication. The core concept of translation (including interpreting) comprises all activities aimed at overcoming barriers to communication – barriers of language and culture, barriers resulting from different levels of expertise and media access as well as sensory barriers. Translation in this sense can be interlingual, intralingual and intermodal/intermedial, and enable communication processes in numerous fields of action. In addition to its traditional role in international specialised communication and literary production, translation also enables accessible, inclusive communication and thus enhances cohesion in societies which are growing increasingly diverse and fragmented. Language technologies and digital language resources are gaining more and more importance in supporting and enabling translation in all these fields. Translation contributes to equitable access to information and communication processes, using multimedial analogue and digital technologies. It facilitates social participation for all sectors of the population, particularly minorities and persons with disabilities.

As well as excellence in research, the Centre assumes social responsibility through critical reflection on professionalisation and cultural processes as well as the qualification of students. Research and teaching at the Centre enable individuals and institutions to prepare for future social and economic requirements and demands in the field of transcultural communication and processes of cultural transformation. Its researchers, students and graduates are able to identify transcultural communication needs and opportunities, to recognise and professionally meet translation needs, and to actively use, advance and critically appraise technological tools. They are aware of the multifaceted nature of translation and transcultural communication and are capable of academically analysing the many dimensions of translation. They maintain an overview of discourses, processes and production networks, pursue comprehensive approaches to communication and translation, and are able to act purposefully within these networks while critically assessing and advancing them.

4.Z1.2 Key Research Areas

Technologies and socio-cognitive processes in translation and interpreting

This key research area focuses on the sociological, cognitive and technological aspects of current and future translation and interpreting practice, and examines the way in which translators and interpreters as well as other stakeholders interact with each other and with technologies. Innovative methods of investigation and development are used to study processes, actors, networks, resources and technologies to represent the challenges and strategies for solutions in translating and interpreting practice. Research in this area is also oriented towards the further development of a greater diversity of tools for machine and computer-aided translation and interpreting, the language industry and multilingual terminological and other multimodal language resources. Research topics include cognitive science-based modelling and representation of terminological dynamics, linguistic diversity and variation in multilingual specialised communication; the cognitive demands (usability, accessibility) made by different user groups on language technology and language resources; the possibilities and limitations of the formalisation and automation of translation processes in the international language industry; and the assessment of the socio-cognitive and socio-communicative effects of these technological developments. Special emphasis is given to the advancement of new paradigms of machine translation, the multilingual semantic web and the processing of terminological data from the perspectives of computer linguistics as well as socio-cognitive technology assessment.

Translation and interpreting in social, institutional and media contexts

This key research area examines processes and products of translation and interpreting and the manifold media manifestations of translation in different socio-cultural communication contexts in the past and present. Research in this field of studies includes the position and role of translators and interpreters in specific institutional settings; the function and effect of translation and interpreting in the target-cultural context; and the links between translation and other forms of transcultural communication, such as lingua franca communication. The social, institutional and media-related conditions of accessible communication in its manifold forms and functions also play an important role in this context. Such work draws on sociological theories and methods of the social sciences as well as approaches based on discourse analysis and critical reflection. Inquiry focuses on mediation processes in various social settings, including

transcultural specialised communication, the production of works of literature and other media, and interpreting in legal, healthcare and social-service institutions in increasingly multicultural societies.

4.Z1.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Computational Terminology and Machine Translation
- Interpreting Studies
- Interpreting Studies and Didactics of Translation
- Interpreting Studies with a Focus on Community Interpreting
- Transcultural Communication
- Translation Studies
- Translation Studies
- Translational Terminology Studies and Translation Technology

4.Z1.4 Subject Dedication of Future Professorships and Status of Implementation

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Interpreting Studies

Time of appointment:

funding via vacant academic positions at the Centre (presumably as of 1 October 2026)

4.Z2 Centre for Sport Science and University Sports

4.Z2.1 Objectives

Sport plays an important role in modern society. This applies to both sport as a leisure activity and top-level professional sport, as well as to health promotion, and the integration and recreation of diverse population groups. The subject of sport and physical education is of key relevance at school, as well as in prevention, rehabilitation and therapy settings. Furthermore, sport is an important topic in the mass media and a central factor in the business world. This multifaceted significance of sport requires scientific research, monitoring and counselling in order to support positive and minimise negative effects.

Sport science encompasses several subdisciplines such as sports physiology, biomechanics, training science, sports nutrition, sports psychology, sociology of sport and sport economics, which study sport and physical exercise, as well as the human beings, organisations and institutions involved, from different perspectives. Sport science is characterised by a wide variety of theoretical and methodological approaches, which come from the natural sciences, human science, social sciences and historical disciplines.

Sport science is an empirical discipline based on theory formation, with a cross-sectional and integrative orientation. Its research projects are often interdisciplinary and multidisciplinary in nature. The heterogeneity and diversity of subjects in sport science holds great potential, which should be further exploited. The existing cooperation within and between universities, as well as the Centre's integration into national and international networks will be maintained and further developed.

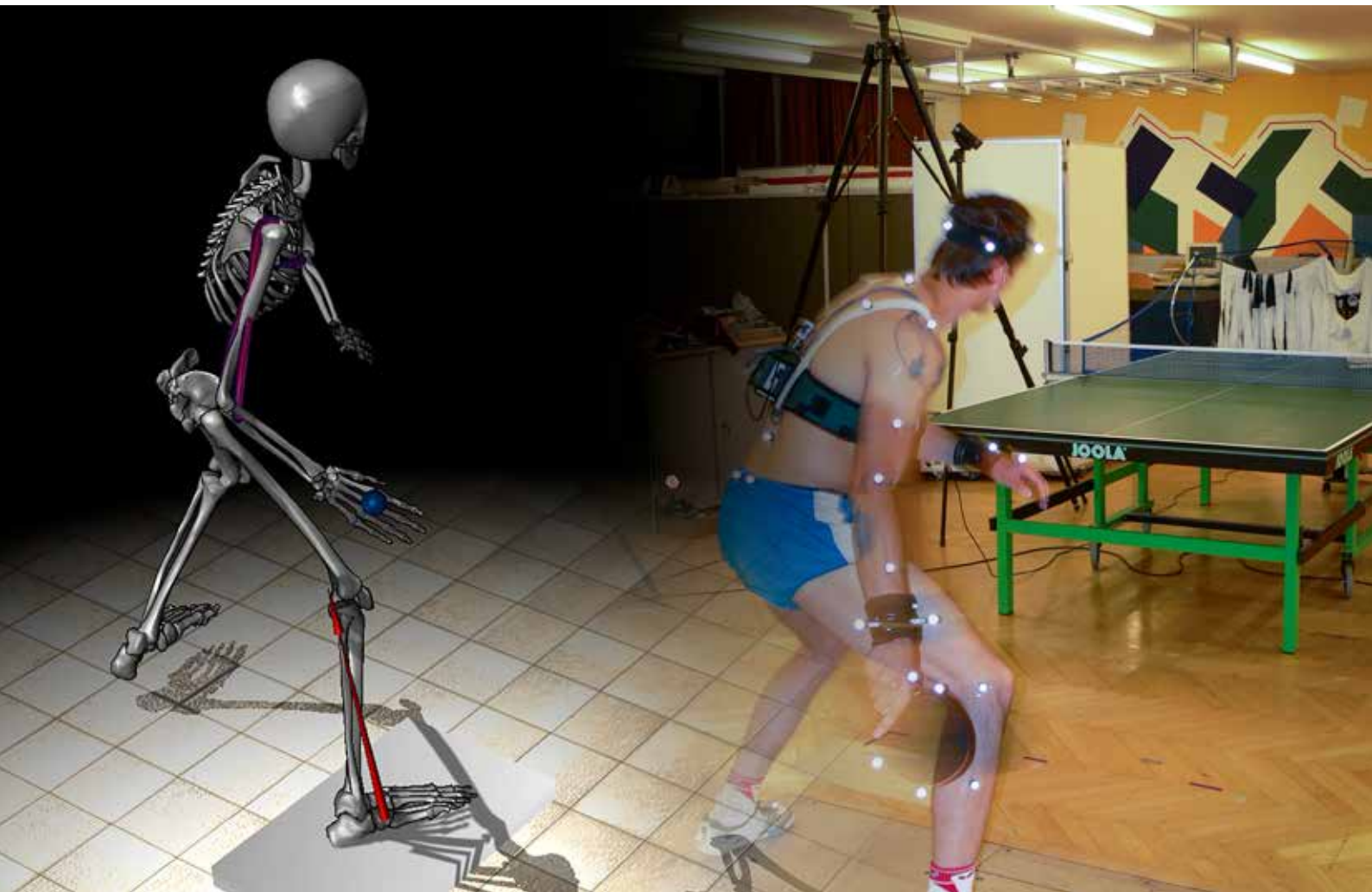
The Department of Sport Science and the University Sport Institute (USI) together form an organisational unit of the University of Vienna, and cooperate with the Austrian Institute of Sports Medicine (ÖISM).

4.Z2.2 Key Research Areas

The research activities of the Centre for Sport Science and University Sports focus on the following key areas:

Health promotion and prevention

In view of widespread lack of physical activity, and the associated lifestyle diseases (e.g. cardiovascular diseases or cancer), physical activity and sport have an important social and socio-



economic function. In spite of well-founded knowledge about the health benefits of physical activity, children, adolescents and adults, as well as older people do not exercise enough. In this regard, the basic correlates and interventions for adopting sustainable healthy lifestyles, behaviour change techniques and commitment to sport are explored.

Goal-oriented and effective strategies for coaching and for teaching sport and exercise in health and social care as well as educational settings result from systematic research as well as knowledge-based transfer of competences to instructors. Inclusive approaches that take cultural and societal diversity into account will continue to be of particular importance in this field. The effects of physical activity and sport on the society's learning culture and the system of education, health and school are analysed theoretically and empirically and reflected critically.

Assessment – monitoring – intervention

Studies in sport science provide the theoretical basis for new practical, informational and technological developments in sports contexts. In addition, the scientific examination of the bio-

mechanical, motor, physiological, biological and training-scientific-related, social and psychological aspects of human movement and sport permits conclusions regarding performance-enhancing and therapeutic measures.

In this context, the implementation and assessment of effective, evidence-based interventions aimed at optimising, preserving and restoring physical performance play a key role. The analysis of physical performance is, in turn, the prerequisite for successful interventions, as well as for planning and controlling training processes in various (competitive) sport settings, as well as in educational and therapeutic settings.

4.Z2.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any

future subject dedication of professorships, nor the ones dealt with in the following section.

- Kinesiology with Special Emphasis on Biomechanics and Sports Informatics
- Sport and Exercise Physiology

4.22.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Sociology of Sport and Sport Economics
- Sports Nutrition (joint appointment with the Faculty of Life Sciences)
- Training Science with Biological Orientation

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:
Biomechanics and Sports Informatics

Time of appointment:
following vacancy of the Professorship of Kinesiology with Special Emphasis on Biomechanics and Sports Informatics (presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship:
Sports Technology

4.23 Centre for Molecular Biology

4.23.1 Objectives

The Max Perutz Labs Vienna is a partnership between the Centre for Molecular Biology at the University of Vienna and the Centre for Medical Biochemistry at the Medical University of Vienna. The goal of this unique collaboration is to tackle major scientific problems and emerging challenges at the interface of biology and medicine. The Centre's mission can be summarised by the term 'mechanistic biomedicine'. The term 'mechanistic' is used to describe the quest for how system components causally interact to produce an outcome, and the Centre's ambition to become progressively less descriptive and more mechanistic as it probes more deeply into scientific phenomena. The Centre follows the conviction that a proper understanding of disease requires a fundamental understanding of causal molecular mechanisms, the elucidation of which often originates from curiosity-driven basic research pursued over long periods of time and which, in many cases, cannot be easily planned in advance.

Two important aspects of mechanistic biomedicine will be particularly emphasised and expanded in the coming years.

- Researchers at the Max Perutz Labs will increasingly aim to reconstitute complex biomedical phenomena. Eduard Buchner's discovery of cell-free fermentation in 1897 can be regarded not only as the birth of biochemistry, but also of reconstitution experiments, and these have gained considerable traction over the last years. Reconstitution approaches now range from recreating life in its simplest form ('designer cells'), to studying complex cellular phenomena in cell-free systems, as well as the reconstitution of collective cell behaviour. By reconstituting cellular processes from isolated, well-characterised components, scientists can observe and quantify the emergence of more complex cell-like behaviour, such as cell membrane remodelling, chromosome folding in three-dimensional space and immune receptor signalling or the development of complex tissue structures. Complex cell behaviour, such as intercellular communication in the immune system, can also be reconstituted and causally explained. What can we learn from reconstitution experiments today? First, reconstitution experiments allow researchers to distinguish between functionally 'necessary' and 'sufficient', both regarding the role of individual molecular players and entire pathways in health and disease. Second, testing the predictions of mechanistic models generated

from *in vivo* data is facilitated by the control over all parameters that reconstitution offers. Third, this synthetic biology data can itself provide the input for quantitative modelling, thus generating new and testable hypotheses. Fourth, reconstitution experiments can reveal emergent properties such as qualitative changes in a system, i.e. the tendency of a system to show a behaviour that cannot be deduced from the properties of the isolated, constituent components. Reconstitution experiments are inherently multidisciplinary, requiring the expertise from biochemistry, cell biology, quantitative modelling and biophysics. This commitment to cellular reconstitution of complex systems is a key strategic decision that will guide scientists at the Max Perutz Labs in their pursuit of the answers to fundamental questions in contemporary biomedicine.

- The Max Perutz Labs will make considerable efforts to analyse biological processes across spatial and temporal scales. Since biological processes are inherently multiscale and need to be explained at these different scales (from atomic to visible to the human eye), this presents a considerable future challenge. For example, cancer progression involves interdependent, multi-factorial processes that often take place on a wide range of spatial and temporal scales. Starting with a series of genetic mutations, a small, premalignant lesion develops into an aggressive primary tumour, which interacts and manipulates its environment to metastasise and overwhelm an entire organism. Cancer treatment requires a deep mechanistic understanding of tumour biology, which has to bridge events at the atomic scale with the state of diseased cells as well as the surrounding tissues. For these reasons, multiscale approaches are essential for an integrated understanding of healthy and diseased biological systems. The first step for implementing a multiscale analysis is to travel across the scales and visualise them. Information at the molecular level alone is not enough to obtain mechanistic information. Therefore, information must also be generated within the context of intact cells in order to fully grasp how molecules function in a complex native environment. Recent technological advances have promoted the development of such *in situ* structural biology approaches in several disciplines, including cryo-electron microscopy and tomography, mass spectrometry, super-resolution microscopy, NMR, computational modelling and possibly simulation on high-performance computers. A second step of a multiscale analysis is to collect various types of experimental data available at different scales. A third step is to employ quantitative modelling and to develop new theoretical approaches. A fourth step is to develop minimal

models, such as the reconstituted systems described above in terms of which components are functionally necessary and sufficient. Combining all these steps allows researchers to bridge observations at different scales and to create a coherent account of the entire biological system under study. Developing the experimental, theoretical and computational frameworks to bridge these differences in spatial and temporal scale will remain a major challenge for decades to come and can be a major driver of innovation and discovery at the Max Perutz Labs.

The Max Perutz Labs has the following four strategic priorities:

4.Z3.2 Key Research Areas

Research programmes at the Max Perutz Labs are organised into four key areas: mechanistic cell and developmental biology; chromatin, RNA and chromosome biology; infection and immunity; and structural and computational biology. Each key research area supports and contributes to the mission of the Max Perutz Labs, which is to analyse and reconstitute fundamental biological processes across different scales. The number of key research areas has been reduced from seven to four in line with the Scientific Evaluation Board report to sharpen the focus and thus the international visibility of the institute. Future recruitment strategies will aim to reinforce each of these key research areas and thereby the mission of the Max Perutz Labs. The ultimate goals in this regard are to create an interactive environment promoting fundamental discoveries in the molecular life sciences and to strengthen the ties between basic research on the one hand and clinical application on the other.

Mechanistic cell and developmental biology

Every one of us develops from a single cell into an organism comprising some 30 trillion cells, which fulfil numerous different tasks. The instructions for this body plan consist of a diverse array of complex and highly regulated processes that need to occur precisely and on time in every single cell. The correct functioning of fundamental cellular processes such as signalling, quality control and biogenesis of macromolecular assemblies and organelles is of the utmost importance. Mistakes in these processes can lead to disease. Scientists at the Max Perutz Labs study fundamental cellular and developmental processes at a mechanistic level, ranging from autophagy to signal transduction, and from the mechanisms controlling cell identity to the internal substructure and organisation of the cell. Strong synergies exist with each of the other key research areas depending on the biologi-

cal questions being asked. These questions of mechanistic cell and developmental biology are studied across both spatial and temporal scales, employing various approaches to analyse the properties of individual molecules, larger molecular assemblies, individual cells up to entire organisms. The approaches employed include various microscopy techniques, biochemistry techniques, omics (proteomics, genomics, metabolomics and lipidomics) and genetics.

Chromatin, RNA and chromosome biology

2020 marks 20 years since the first draft of the human genome sequence was published. In the intervening years, advances in technology have led to the point that individual genomes can be sequenced affordably. For the first time, we have a window into the variations in our genetic code that lead to phenotypic differences in our species and more sophisticated tools with which to probe the genetic basis of disease. Researchers at the Max Perutz Labs in the key research area of chromatin, RNA and chromosome biology employ the whole breadth of technologies available at the Max Perutz Labs and the Vienna BioCenter to study the dynamic organisation, regulation and transmission of our genetic material. A focus lies on the spatial and temporal patterns of gene expression, for instance during the development of organisms, and the stability of genomes in mitotic and meiotic cells, which represent somatic cells and the germline. However, the genetic material is not the only object of research in this area: several groups in RNA research continue to push forward our understanding of the biogenesis of RNAs, their post-transcriptional processing and regulation, and the roles of various RNAs in cellular physiology.

Infection and immunity

Average life expectancy around the world in 1875 was approximately 35 years. Today, it is over 80 in some parts of the world. Medical innovation, for instance in the form of antibiotics and vaccines has undoubtedly played a large role in this transformation and continues to be as relevant as ever in times of COVID-19. Key to this is a molecular understanding of our body's defence systems as well as the biology of the pathogens attacking our body. Researchers at the Max Perutz Labs, therefore, study both sides of the coin: On the one side, immunologists study our innate and adaptive immune systems and, on the other, infection biologists study the pathogens themselves and their host interactions. This research area represents a major focus of precision medicine, which works on the development of new therapeutics, ultimately including re-programmed immune cells of the immune system in the treatment of cancer.

Structural and computational biology

In order to understand any of the myriad functions that constitute life or cause disease, we must understand the molecular processes at the highest structural resolution possible. Research in structural and computational biology at the Max Perutz Labs covers biological processes from muscle development to cilium biogenesis, from nucleic acid processing to signal transduction. The Max Perutz Labs takes an integrative approach to structural biology and use complementary methods to generate comprehensive mechanistic models. A strong focus on biochemistry and computational biology supports the structural biology work in many areas. Numerous cooperation links have also been established with the Faculties of Life Sciences, of Chemistry, of Physics and of Mathematics, and will be continued in the future. High-performance computers permit the analysis of large evolutionary datasets and the molecular dynamics simulation of macromolecules. This research area will continue to play an important role in the analysis and reconstitution of fundamental processes across both spatial and temporal scales.

4.Z3.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Bioinformatics (30 %; 50 % at the Medical University of Vienna and 20 % at the Faculty of Computer Science)
- Cell and Developmental Biology
- Cell Signalling
- Chronobiology
- Crystallography of Biomolecules
- Eukaryote Genetics
- Genetics
- Genetics and Biochemistry
- Immunobiology
- Immunobiology
- Mathematics and Biology (20 %; 80 % at the Faculty of Mathematics)
- Membrane Biochemistry
- Microbiology
- Molecular Bacteriology
- Molecular Biology (joint appointment with the Medical University of Vienna)
- Molecular Biophysics
- Molecular Drug Targeting (10 %; 90 % at the Faculty of Life Sciences)

- Molecular Spectroscopy and Photochemistry
- Quantitative Modelling of Biological Networks (joint appointment with the Centre for Molecular Biology)
- RNA Biology

4.Z3.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- Advanced Microscopy and Cellular Dynamics

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Immunobiology

Time of appointment:

following vacancy of the Professorship of Immunobiology

(presumably as of 1 October 2021)

Subject dedication of professorship:

Cell Signalling

Time of appointment:

following vacancy of the Professorship of Cell Signalling

(presumably as of 1 October 2022)

Subject dedication of professorship:

Structural Biology

Time of appointment:

following vacancy of the Professorship of Microbiology

(presumably as of 1 October 2022)

Subject dedication of professorship:

Bioinformatics

(joint appointment with the Medical University of Vienna)

Time of appointment:

following vacancy of the Professorship of Bioinformatics

(presumably as of 1 October 2024)

Future professorships subject to availability of funds

Subject dedication of professorship:

Chromosome Biology

Subject dedication of professorship:

Multiscale Analysis of Biological Systems

Subject dedication of professorship:

Molecular Pathogenesis

(joint appointment with the Medical University of Vienna)



4.Z4 Centre for Microbiology and Environmental Systems Science

4.Z4.1 Objectives

The Centre for Microbiology and Environmental Systems Science studies the fundamental role of microorganisms in complex environmental systems. It analyses the way in which bacteria, archaea, fungi, microeukaryotes and viruses interact with each other and with higher organisms, all the way up to human beings. In an interdisciplinary framework, it studies the anthropogenic influence on aquatic and terrestrial systems in order to develop new approaches to solutions to major environmental problems, ranging from pollutants and the eutrophication of ecosystems to the climate crisis. The resulting fundamental insights can contribute to solving pressing questions of humankind and help meet the United Nations' Sustainable Development Goals.

Microorganisms play a key role in sustaining life on Earth and represent a significant part of the global biomass. The manifold functions of microorganisms in aquatic, terrestrial and technological systems determine the environment. In close community with all other organisms, they play a key role in a large number of biogeochemical processes and (global) element cycles. Human beings change these systems. This has resulted in challenges that require a fundamental understanding of the function of microorganisms, microbial communities and environmental systems in order to be overcome. One special strength of the Centre, which has also contributed to its international reputation, is that it explores the entire range of questions in this area, from the detailed functional analysis of microbiomes to the resulting processes and environmental impacts, in an interdisciplinary approach.

The ambition of the Centre is to conduct excellent basic research at an internationally leading level. Through recruiting outstanding researchers, through the specific promotion of women and through innovative interdisciplinary approaches to research, the strengths of the Centre are to be expanded further. In addition to numerous international cooperation schemes, the Centre also collaborates with other disciplines at the University of Vienna in broad thematic areas such as symbiosis research, climate change and the environment. For instance, it studies approaches to solutions for environmental and climate problems, in cooperation with sociology, the life sciences and earth sciences, as well as international institutes such as IASA. Cooperation with the Medical University of Vienna to explore the human microbiome is of

particular importance for the Centre. It is in this context that the Joint Microbiome Facility, which enables a link between basic research at the Centre and questions in the clinical field, is run. The top-level instruments with which the Centre for Microbiology and Environmental Systems Science is equipped give it a leading role with regard to the development and application of state-of-the-art molecular, bioinformatic, microscopic, analytic and isotope-based methods.

4.Z4.2 Key Research Areas

Microbiome and microbe-host interactions

Higher organisms, including human beings, depend on microorganisms that perform manifold functions, some of which are essential for survival. Their partnership with microorganisms ranges from interactions between two organisms all the way to the symbiotic cohabitation of a host organism and a complex microbial community: the microbiome. We are just beginning to understand how these microbial symbioses came into being in the course of evolution, how they work, and how they adapt to a continuously changing environment. This key research area focuses on the evolution of mutualism and parasitism, the ecology and biology of marine symbioses, the interaction between phages and bacteria and plants and microorganisms, as well as the role of microorganisms in human health. State-of-the-art molecular, bioinformatic and imaging methods are used in conducting this research. Links with medical topics play a particularly important role here. Arriving at a better understanding of the interactions between microbiomes, hosts and the environment, as well as their relevance to plants, animals and human beings, is essential for meeting the challenges posed by global ecological and medical problems.

Microbial ecology and ecosystems

Microorganisms are of great importance for all global biogeochemical cycles, and for the food webs in terrestrial, aquatic and technological ecosystems. In this key research area, the focus lies on the structure and function of environmental microbiomes and the resulting fluxes, particularly of carbon, nitrogen, phosphorus and sulphur compounds. Microorganisms of functional importance are studied in an interdisciplinary approach – using, for instance, state-of-the-art methods of functional genomics, single-cell microbiology, isotope analysis and chemical microscopy. The insight gained into the ecology, interactions and evolution of microorganisms provides the basis for a better understanding of the ecosystem functions of microbes and for the optimised use of environmental microbiomes in technological systems.

Global change and environmental processes

The environment is a complex system in which the living world interacts with abiotic nature. Environmental systems are undergoing continuous change, particularly due to the global change brought about by human beings. Environmental processes can only be understood by exploring their fundamental mechanisms, and by studying the interplay between biological and geochemical systems at all levels of organisation. The goal of this key research area is to identify, explore and model processes in terrestrial and aquatic systems, as well as anthropogenic influences on these systems. The focus is on questions concerning changes of biogeochemical cycles, feedback to the climate, and questions of contaminant dynamics. State-of-the-art high-resolution laboratory methods are being used here, particularly in the field of mass spectrometry and isotope analysis. The important role of this research area is rooted in a comprehensive understanding of complex environmental processes and human influence upon them, which is an essential basis for social decisions of the future.

4.Z4.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. For information purposes, the research areas that are currently covered are provided in square brackets. The names outside the square brackets give the official designations. In addition to the professorships listed, the Centre for Microbiology and Environmental Systems Science maintains links with individual professors from the Faculty of Chemistry. These professors with 'bridging functions' are not enumerated here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Ecophysiology of Microorganisms
- Environmental Geosciences and Applied Sedimentary Petrology [Environmental Geosciences]
- In-Silico Genomics [Computational Systems Biology]
- Isotope Chemistry and Biogeochemistry
- Microbial Communities
- Microbial Ecology
- Microbial Population Biology and Genetics; section 99a of the Universities Act (temporary: for six years)

- Microbial Symbioses
- Physiological Ecology and Ecosystem Research
- Plant Physiology and Ecology [Soil Ecology and Climate Change]

4.Z4.4 Subject Dedication of Future Professorships and Status of Implementation

Dedication of professorships in line with research profiles and with the need to teach fundamental subjects

Subject dedication of professorship:

Soil Ecology

Time of appointment:

funding via vacant academic positions at the Centre (presumably as of 1 October 2027)

Future professorships subject to availability of funds

Subject dedication of professorship:

Microbial Viruses

Subject dedication of professorship:

Complexity in Microbiology and Environmental Systems

4.75 Centre for Teacher Education

4.75.1 Objectives

The Centre for Teacher Education unites all the teacher education programmes of the University of Vienna under one roof. The mission of the Centre is to actively contribute to teacher education at the University of Vienna with regard to teaching, research and the Third Mission, as well as in the areas of career development of early stage researchers and internationalisation. For this purpose, the Centre has initiated, and continues to maintain, an exchange between all stakeholders involved in teacher education. It plays an active role in strategic planning, provides consultancy, performs numerous service functions, and takes part in quality assurance. It thus contributes to the consistent high quality of teacher education, as well as to its visibility and recognition.

Ultimately, the quality of teacher education is reflected in the way in which graduates approach teaching at schools, and encourage goal-oriented learning on the part of their pupils. Professional actions and decisions in educational fields have to be based on the best

knowledge available. Research at the Centre is therefore aimed at providing reliable knowledge which can, for instance, help identify and explain problems of teaching and schools, at empirically testing theoretical models of effective teaching and productive learning, at devising and evaluating promising measures, and analysing the conditions required for an effective implementation of innovative approaches in practical fields. In this sense, the Centre for Teacher Education is also committed to integrating insight from international and national research into the contents and methods of teacher education at the University of Vienna.

A research and teaching profile that is focused on teaching and on schools, as well as on teacher education, plays a key role in this context. In addition, the Centre attaches great importance to encouraging and supporting research and teaching projects that tackle key challenges of teaching and schools. Even though certain problems related to teaching and schools remain relevant across all periods of time, social change has also continued to lead to new challenges in education that are stressful for professional teachers as well as for the school students (and parents) – not least because they involve chances in life. Keywords such as migration, educational expansion, digital transformation or



inclusion represent the current challenges that the educational sector must face. Ultimately, this means that they need to be overcome by teachers in the classroom, in school buildings, in talks with parents, in preparing lessons, as well as in collaboration between colleagues, and in implementing new syllabuses and instruments of quality assurance.

In its research, teaching and the Third Mission, the Centre for Teacher Education at the University of Vienna needs to come up with good responses to these challenges, and to prepare future teachers for them accordingly.

Three current challenges for teacher education are highlighted below.

- The diverse life situations and heterogeneous learning conditions of pupils have increasingly become a determining factor of everyday life in class and at school. While schools must therefore endeavour to ensure that, ideally, all pupils can, in all areas of learning, attain a level of competence that enables social participation, they must also respond to individual situations, discover and foster talents, adapt the learning speed and offer differential treatments whenever necessary. They must promote social exchange and form learning communities and, in view of the grand societal changes, they are facing new expectations – for instance, with regard to developing 21st-century skills and meeting the Sustainable Development Goals (UNESCO). For teacher education, this means preparing students for these challenges in the best possible way – by, for instance, developing diagnostic competence while at the same time communicating a realistic picture of professional options for action. However, what is required first and foremost is solid research in order to develop and test new approaches and orientations which could help to overcome the current challenges. Strategically, good coordination and intensive cooperation in the teaching and research of all disciplines involved in teacher education (particularly subject didactics, school pedagogy and educational psychology) have become more important than ever.
- The aim of preparing future teachers for teaching tasks on the basis of evidence-based knowledge underlines the need for research and represents a conscious departure from apodictic opinions on ‘good’ teaching. For subject didactics and for educational research as a whole, this represents a challenge to examine issues that are solid in terms of methodology, based on sound theory and of practical usefulness. The last few years have seen great progress espe-

cially regarding empirical research methods. In order to build on these achievements, it is necessary to be familiar with more advanced methods. Parallel to this development in research, schools are increasingly expected to base their teaching and development on the evaluations or the data/findings of, for instance, standard-related surveys or individual competence assessments. However, considerable uncertainty as to how this can be done in practice is also apparent, and many possibilities of quality assurance and quality development are not being utilised. The theme of teaching and school development needs to firmly establish these new aspects in teacher education.

- Whereas, until recently, the term ‘digitalisation’ mainly referred to new media technologies, today the term ‘digital transformation’ stands for a much more fundamental and more far-reaching transition, characterised by a high speed and dynamism that encompasses all fields of life, and is associated with changes that are, in fact, hardly foreseeable. School as an institution and as a place of learning needs to reorient itself through and towards the process of digital transformation: The preparation for lifelong learning takes on a new quality, approaches to uncertainty and ambiguity need to be learned, and aspects of personality development (such as identity, self-assurance and participation) that are addressed in the context of educational goals need to be filled with new meaning. The digital transformation requires new approaches to education, professional competences and roles, which need to be developed in the context of teacher education (based on academic evidence).

Against this background, the Centre fulfils its tasks in the area of teacher education across different faculties, and ensures their strategic orientation. In addition to research, the Centre thus pursues a variety of goals beyond basic teaching and the administration of the Centre.

- It devotes specific attention to the qualification objectives of the degree programmes across the four main supporting pillars (subject, subject didactics, educational research as well as teaching practice), thus enhancing the coherence of education.
- At the University of Vienna, many lecturers in the areas of subject didactics and educational studies are also employed in the school system. In order to ensure research-based teaching in the areas of subject didactics and education, these lecturers are integrated into the Centre’s activities.

- The Centre also serves as a central contact point for all students of Teacher Education in the North-East Schools' Group, across the individual faculties and centres. It has developed and runs an interactive online advisory tool for students, pupils and teachers. The corresponding analysis of user behaviour contributes to the research-based further development of teacher education programmes.
- Running and assisting the teaching practice programmes is part of the organisational and administrative tasks of the StudiesServiceCenter Teacher Education, as well as a key research and development area of the Centre for Teacher Education. Sustainable reflection on the practical experience of students, as well as of teachers during the early stages in the teaching profession, requires high-quality training of school mentors. Mentors' training thus is among the key tasks of the Centre.
- The Centre regards itself as a platform for the exchange between schools and the academic world. It offers opportunities for school-related activities at the University and it supports contact between researchers and schools through appropriate measures. The models of cooperation schools and the 'Kooperationsschule plus' have proven their worth in past years.
- The Centre is involved in the joint evaluation of all teacher education programmes and increasingly contributes its expertise in the areas of in-service and continuing education and the training of teachers.

4.Z5.2 Thematic Areas

The academics at the Centre for Teacher Education work on research projects in the fields of education and subject didactics, whose themes cover almost all disciplines, and often include questions that span several subjects. As almost all academics at the Centre for Teacher Education also work at another faculty or centre, their research projects are also projects of the said faculties and centres.

The majority of research activities in the areas of subject didactics and education are covered by the thematic areas described below, and address current challenges for teaching, schools and teacher education. A closer cooperation and exchange between subject didactics and support of empirical work will permit a more precise focus in order to develop the above cross-sectional tasks to key research fields of the Centre.

Research on teaching and learning in educational contexts

Teaching is in the centre of educational activity at schools. Research on teaching and learning in educational contexts studies the conditions and processes that enable successful learning, i.e. meeting the relevant multidimensional educational goals and curricular requirements. It provides not only explanatory knowledge but also evidence for possibilities of advancing teaching in a targeted way. Subject didactic research focuses particularly on curricular questions, competence models, and subject-specific learning and teaching processes. Cross-disciplinary topics are mainly addressed in general didactics and school pedagogy, as well as in language teaching and language learning research, and in political studies. Further areas of research are teaching and learning under conditions of diversity and heterogeneity, the challenges of inclusive schooling and the digital transformation.

Research on quality and quality development of schools and the school system

The quality of teaching also depends on the general conditions at individual schools and in the school system – which is examined in this thematic area. This research focuses on cooperation among teachers, collaboration with parents and developing school into a stimulating, inclusive learning and living environment where individual interests are encouraged, as well as on processes of quality assurance by means of standard assessment systems and informal competence measurement (IKM and iKM^{plus}). Again, research in this area is mainly oriented towards obtaining insights to enable the further development of schools.

Research on teachers' professional development

Teacher education needs to build on current cutting-edge teaching- and school-related research, and ensure that students become familiar with that level of knowledge and learn to implement it in a professional way. The question as to how professional competence based on subject-related and educational expertise is developed, how it interacts with professional convictions, motivational orientations and self-regulating skills, and which formats of teaching and practice are suitable for teacher education, is in itself a topic of current research. A question of particular interest here is how, both during and after their studies, teachers are prepared to enable them to overcome current challenges (inclusion, digital transformation, as well as how to handle violence and exclusion) in a professional way.

4.25.3 Professorships as of 1 October 2020

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2020 (section 98 and section 99, para. 3, section 99, para. 4 and section 99a of the 2002 Universities Act) are listed here. In addition to the professorships listed, the Centre for Teacher Education maintains links with numerous other professors of other faculties and centres. These professors with 'bridging functions' are not enumerated here. The list below shows the situation at a certain point in time and does not predetermine any future subject dedication of professorships, nor the ones dealt with in the following section.

- Applied Computer Science (joint appointment with the Faculty of Computer Science)
- Didactics of Biology (joint appointment with the Faculty of Life Sciences)
- Didactics of Chemistry (joint appointment with the Faculty of Chemistry)
- Didactics of Computer Science (joint appointment with the Faculty of Computer Science)
- Didactics of History (joint appointment with the Faculty of Historical and Cultural Studies)
- Didactics of Physics (joint appointment with the Faculty of Physics)
- Didactics of Political/Civic Education (joint appointment with the Faculty of Social Sciences)
- Digital Education and Learning
- English Language Education (joint appointment with the Faculty of Philological and Cultural Studies)
- English Linguistics (joint appointment with the Faculty of Philological and Cultural Studies)
- Inclusive Education and Disability Research (joint appointment with the Faculty of Philosophy and Education)
- Mathematics with Special Emphasis on the Didactics of Mathematics and Computer Science (joint appointment with the Faculty of Mathematics)
- Modern German Literature and its Didactics (joint appointment with the Faculty of Philological and Cultural Studies)
- Religious Education and Catechetics (joint appointment with the Faculty of Catholic Theology)
- Research on Schooling and Teacher Education (joint appointment with the Faculty of Philosophy and Education)

- School Pedagogy with Particular Emphasis on Social, Cultural and Linguistic Diversity (joint appointment with the Faculty of Philosophy and Education)
- Subject-Specific Didactics (Language Teaching and Language Learning Research) (joint appointment with the Faculty of Philological and Cultural Studies)

4.25.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2020

- School Pedagogy with Particular Emphasis on Secondary Education (joint appointment with the Faculty of Philosophy and Education)

Future professorships subject to availability of funds

Subject dedication of professorship: **Educational Diagnostics and Counselling in Schools**

(cooperation with the Faculty of Philosophy and Education and the Faculty of Psychology with regard to advertising and recruitment)

Subject dedication of professorship: **School Development and Quality Assurance**



5. Degree Programmes at the University of Vienna

Based on the existing degree programmes of the academic year 2020/2021, the following modifications of the programme portfolio are planned (new degree programmes, phasing out of existing programmes). Modifications that concern the existing curricula can, for instance, result from the academic profile of newly appointed professors and from quality assurance procedures that have been carried out. They are not listed here.

The courses of many degree programmes at the University of Vienna are held in German and English. Degree programmes that are exclusively held in English are marked with an asterisk (*). In addition, the courses of many other degree programmes are held in English or another foreign language.

For reasons of clarity, the following list is presented according to subjects; interdisciplinary master's programmes are listed in chapter 5.7: Interdisciplinary Degree Programmes (towards the end of the list); interested students can find an overview of the numerous non-consecutive study options that are currently available in the Master Access Guide at <https://slw.univie.ac.at/en/studying/master-programmes/master-access-guide/>

5.1 Theology

Degree programmes as of 1 October 2020		Modifications planned
Diploma programme		
Catholic Theology		
Bachelor's programmes	Master's programmes	Modifications planned
Religious Education	Religious Education Advanced Theological Studies	
Protestant Theology	Protestant Theology	
Islamic Theology	Islamic Religious Education	

5.2 Law

Degree programmes as of 1 October 2020		Modifications planned
Diploma programme		
Law		
Bachelor's programmes	Master's programmes	
	Business Law (in cooperation with the University of Klagenfurt)	A bachelor's programme and a master's programme in International Legal Studies is planned, no date for establishment has yet been scheduled.

5.3 Social Sciences, Business and Economics

Degree programmes as of 1 October 2020		Modifications planned
Bachelor's programmes	Master's programmes	
Journalism and Communication Studies	Journalism and Communication Science*	A master's programme in Demography (working title) is planned (to be established in the winter semester of 2021/2022, see chapter 5.7: Interdisciplinary Degree Programmes).
Political Science	Political Science	
Social and Cultural Anthropology	Social and Cultural Anthropology Cultural Differences and Transnational Processes (CREOLE; cooperation with international educational institutions)	
Sociology	Sociology	
	Science – Technology – Society* Nursing Science	
Business Administration	Business Administration	It is planned to replace the master's programme in Economics with a master's programme in Applied Economics and a master's programme in Research in Economics and Finance*. Scheduled to be established in the winter semester of 2021/2022.
International Business Administration	International Business Administration	
Statistics	Statistics	
Economics	Economics*	The master's programme in Business Analytics* has been established (see chapter 5.7: Interdisciplinary Degree Programmes).
	Banking and Finance*	

5.4 Engineering Sciences

Degree programmes as of 1 October 2020		Modifications planned
Bachelor's programmes	Master's programmes	
Computer Science Business Informatics	Computer Science* Media Informatics* Business Informatics	The master's programme in Data Science has been established (see chapter 5.7: Interdisciplinary Degree Programmes).

5.5 Arts and Humanities

Degree programmes as of 1 October 2020		Modifications planned	
Bachelor's programmes	Master's programmes		
Prehistory and Historical Archaeology	Prehistory and Historical Archaeology	The master's programme in Digital Humanities has been established (see chapter 5.7: Interdisciplinary Degree Programmes).	
Classical Archaeology	Classical Archaeology		
Egyptology	Egyptology		
Jewish Studies	Jewish Studies		
History	History Auxiliary Sciences of History and Archival Studies Global History and Global Studies (co-operation with international educational institutions; ERASMUS MUNDUS)		
Art History	Art History		
European Ethnology	European Ethnology		
Ancient History and Studies in Classical Antiquity	Ancient History and Studies in Classical Antiquity		
Byzantine Studies and Modern Greek Studies	Byzantine Studies and Modern Greek Studies		
Classical Philology (bachelor's programme with internal specialisation: Greek, Latin)	Classical Philology (master's programme with internal specialisation: Greek, Latin, as well as Medieval and Neo-Latin Studies)		
German Philology	German Philology German as a Foreign and Second Language		
Dutch Studies (phased out)	Dutch Studies (phased out)		Phasing out of the degree programmes was started in the winter semester of 2019/2020; the phasing-out process is ongoing. Students can acquire competences in the field of Dutch studies as part of extension curricula in the future.
Romance Studies (bachelor's programme with the following language options: French, Italian, Spanish, Portuguese, Romanian)	Romance Studies (master's programme with the following language options: French, Italian, Spanish, Portuguese, Romanian)		
English and American Studies*	Anglophone Literatures and Cultures* English Language and Linguistics*		
Scandinavian Studies	Scandinavian Studies		

Degree programmes as of 1 October 2020		Modifications planned
Bachelor's programmes	Master's programmes	
Slavonic Studies (bachelor's programme with the following language options: Bosnian/Croatian/Serbian, Bulgarian, Polish, Russian, Slovakian, Czech, Slovene, Ukrainian)	Slavonic Studies (master's programme with the following language options: Bosnian/Croatian/Serbian, Bulgarian, Polish, Russian, Slovakian, Slovene, Czech, Ukrainian)	
Hungarian Studies and Fennistics	Hungarian Studies and Finno-Ugrian Studies	
African Studies	African Studies	
Oriental Studies	Ancient Oriental Philology and Oriental Archaeology The Arab World: Language and Society Turkish Studies	
Languages and Cultures of South Asia and Tibet	Languages and Cultures of South Asia Tibetan and Buddhist Studies	
Japanology	Japanology	
Koreanology	Koreanology	
Sinology	Sinology	
Musicology	Musicology	
Linguistics	General Linguistics: Theory of Grammar and Cognitive Linguistics Applied Linguistics Indo-European Studies	
Comparative Literature	Comparative Literature	
Theatre, Film and Media Studies	Theatre, Film and Media Studies	
Philosophy	Philosophy	
Education	Education	
Transcultural Communication	Translation	

5.6 Natural Sciences

Degree programmes as of 1 October 2020		Modifications planned
Bachelor's programmes	Master's programmes	
Mathematics	Mathematics*	A master's programme in Green Chemistry is being discussed with TU Wien and the University of Natural Resources and Life Sciences, Vienna. No date for establishment has yet been scheduled.
Chemistry	Chemistry	
	Biological Chemistry	
	Chemistry and Materials Technology (degree programme established in cooperation with TU Wien)	
	Food Chemistry	
Physics	Physics	
	Physics of the Earth (joint curriculum with the Comenius University in Bratislava)*	
Meteorology	Meteorology	
Astronomy	Astronomy	
Earth Sciences	Earth Sciences	
Geography	Geography Cartography and Geoinformation Regional Research and Regional Planning Urban Studies (cooperation with international educational institutions)*	It is planned to rename the master's programme in Geography during the upcoming curriculum reform. New designation: Geography: Global Change and Sustainability*
Biology	Anthropology Genetics and Developmental Biology Molecular Biology Molecular Microbiology, Microbial Ecology and Immunobiology* Conservation Biology and Biodiversity Management Ecology and Ecosystems* Botany* Behaviour, Neurobiology and Cognition Zoology	<p>It is planned to rename the master's programme in Anthropology to Evolutionary Anthropology.</p> <p>It is planned to establish a master's programme in Molecular Precision Medicine* as a joint degree programme with the Medical University of Vienna (scheduled to be established in the winter semester of 2021/2022).</p> <p>The master's programme in Molecular Biology and the master's programme in Genetics and Developmental Biology are intended to be merged in the master's programme in Molecular Biology, with an English designation only.</p> <p>The master's programme in Molecular Microbiology, Microbial Ecology and Immunobiology* will also have only an English designation.</p> <p>Changing the master's programme in Behaviour, Neurobiology and Cognition to an English only programme is subject to discussion.</p> <p>A master's programme in Neuroscience* in cooperation with the Medical University of Vienna is planned (see chapter 5.7: Interdisciplinary Degree Programmes).</p>

Degree programmes as of 1 October 2020		Modifications planned
Bachelor's programmes	Master's programmes	
Nutritional Sciences	Nutritional Sciences	
Psychology	Psychology	
Sport Science	Sport Science European Master in Health and Physical Activity (cooperation with international educational institutions)*	
Pharmacy	Pharmacy Drug Discovery and Development*	A possible intensification of the cooperation with the Medical University of Vienna is being explored.

5.7 Interdisciplinary Degree Programmes

Degree programmes as of 1 October 2020
Master's programmes
Austrian Studies – Cultures, Literatures, Languages
Computational Science
Environmental Sciences*
Gender Studies
Development Studies
Middle European interdisciplinary master's programme in Cognitive Science (cooperation with international educational institutions)*
Religious Studies
East Asian Economy and Society*
History and Philosophy of Science – HPS
Bioinformatics (operated jointly with the Medical University of Vienna)
Ethics for Teachers and Professionals
Contemporary History and Media
Culture and Society of Modern South Asia
Interdisciplinary East European Studies
Evolutionary Systems Biology (master's programme with an interdisciplinary orientation, established jointly with the University of Veterinary Medicine, Vienna)*
Master's programme in Philosophy and Economics*
Master's programme in Data Science*
Master's programme in Digital Humanities*
Master's programme in Business Analytics*
Planned interdisciplinary degree programmes
Master's programme in Neuroscience (cooperation with the Medical University of Vienna). No date for establishment has yet been scheduled.
Master's programme in Demography* (working title): scheduled to be established in the winter semester of 2021/2022.

5.8 Teacher Education and Degree Programmes Related to Teaching

Degree programmes as of 1 October 2020	Modifications planned
<p>Students in the bachelor's programmes to obtain a teaching degree for secondary schools (general education) at the University of Vienna are required to combine two of the following teaching subjects:</p> <ul style="list-style-type: none"> Sports and Physical Education Biology and Environmental Studies Bosnian/Croatian/Serbian Chemistry Descriptive Geometry (teaching cooperation with TU Wien) German English Protestant Religion French Geography and Economics History, Social Studies and Political Education Greek Home Economics and Nutrition Computer Science Italian Catholic Religion Latin Mathematics Physics Polish Psychology and Philosophy Russian Slovakian Slovene Spanish Czech Hungarian Inclusive Education (specialisation) 	<p>The teaching subject of Psychology and Philosophy was phased out in the winter semester of 2020/2021.</p> <p>Establishment of the teaching subject of Ethics provided that the Parliament decides in favour of Ethics as a syllabus-based teaching subject.</p>

Degree programmes as of 1 October 2020	Modifications planned
<p>Students in the master's programmes to obtain a teaching degree for secondary schools (general education) at the University of Vienna are required to combine two of the following teaching subjects:</p> <ul style="list-style-type: none"> Sports and Physical Education Biology and Environmental Studies Bosnian/Croatian/Serbian Chemistry Descriptive Geometry (teaching cooperation with TU Wien) German English Protestant Religion French Geography and Economics History, Social Studies and Political Education Greek Home Economics and Nutrition Computer Science Italian Catholic Religion Latin Mathematics Physics Polish Psychology and Philosophy Russian Slovakian Slovene Spanish Czech Hungarian <p>Specialisation: Inclusive Education in the master's programme to obtain a teaching degree for secondary schools (general education)</p>	<p>Possible cooperation with Alpen-Adria-Universität Klagenfurt in the area of Slovene is being explored.</p>
<p>In addition, the following programmes without compulsory combination of subjects also relate to teacher education:</p> <ul style="list-style-type: none"> Bachelor's programme in Religious Education and master's programme in Religious Education Master's programme in Chinese Studies with Special Emphasis on Teaching Chinese Master's programme in Islamic Religious Education 	

5.9 Doctoral Programmes

Degree programmes as of 1 October 2020	Modifications planned
<p>Regarding the doctoral programmes at the University of Vienna, the following curricula apply:</p> <ul style="list-style-type: none">• Curriculum for the PhD programme in Theological Studies and the doctoral programme in Protestant Theology and the doctoral programme in Catholic Theology• Curriculum for the doctoral programme in Law and the PhD programme in Interdisciplinary Legal Studies• Curriculum for the PhD programme and the doctoral programme in Business, Economics and Statistics• Curriculum for the doctoral programme in Social Sciences• Curriculum for the doctoral programme in Humanities, Philosophy and Education• Curriculum for the doctoral programme in Natural Sciences and Technical Sciences in the field of Natural Sciences• Curriculum for the PhD programme/doctoral programme in Life Sciences• Curriculum for the PhD programme in Sport Science	<p>A PhD programme, in particular for the field of doctoral research of Molecular Biology, to be jointly established with the Medical University of Vienna, is under preparation.</p>

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