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University of Vienna 2025 Development Plan



University of Vienna 2025 Development Plan

Upon the Proposal of the Rectorate

Following Consent by the Senate of the University of Vienna

Unanimously Approved by the University Council of the University of Vienna

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1. Preamble: University of Vienna – Open to New Ideas. 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. In research, it defines a dynamically developing profile, lists the research strengths and emphasises basic research that is open to application and the role of the University in the innovation cycle. The University of Vienna supports expansion into new areas of research and sees interdisciplinarity as its particular opportunity to enable it to be an attractive location for the best academics and students. With its teaching activities, it bears particular responsibility for the qualification of future generations. Here, however, it does not only want to ensure graduates have professional qualifications, it also wants to create curious young people with critical ability who continue to educate themselves.

Extensive investments are necessary so that the University can achieve the goals it has set itself in the coming years. In the next few years the University, in particular in the form of many professorships, tenure track positions and other staff-related and infrastructure measures, will be investing in future-oriented disciplines with particular potential for innovation, will be building bridges regarding subjects within or between faculties or continuing to build on the existing research strengths. It will continue to take suitable measures to carry on increasing the share of women professors. By consistently

implementing the Bologna framework, it will increase vertical and horizontal mobility and enable students to complete specific education pathways. It will continue to develop its locations in both technical and structural terms and consolidate its portfolio of locations.

Due to the autonomy it was granted by the 2002 Universities Act, the University of Vienna has been able to undergo many positive developments in the last decade. Autonomy for staff-related and investment decisions in the implementation of strategic planning has proved a success. As well as the required financial performance, the possibility of controlling the influx of students while using Austria-wide capacities to achieve standard international student-teacher ratios in all fields of study is also necessary. Capacity-oriented university funding will play a key role in improving the University's ability to act and therefore further boost international competitiveness.

To achieve the objectives in the *Development Plan*, it is necessary to maintain and further develop the legally guaranteed autonomy and 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-making process by making use of their expert knowledge. The University needs the political and financial framework conditions which allow it to fulfil its tasks and maintain its attractiveness. The starting point is favourable, 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 of high international visibility, but at the same time in some sub-disciplines a university with a high number of students which – compared with other institutions of high international renown – delivers top research achievements under especially difficult financial framework conditions. 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. Also in comparison to other universities, such as the LMU Munich, the University of Uppsala and the University of Zurich, the University of Vienna – despite a lower funding volume – is able to keep pace in publication achievements and in the acquisition of ERC grants. In the area of third-party funds, which is another indicator of the performance and competitiveness of its researchers, the University of Vienna has been able to remain at a high level in recent years but there is still potential for improvement, in particular in application-oriented research projects, such as those funded by the Austrian Research Promotion Agency (FFG), the Christian Doppler Research Association and by companies. In these areas the University of Vienna, in particular in comparison with the technical and medical universities in Austria, is currently underrepresented (see chapter 2.3: Financial Starting Point of the University of Vienna).

The achievements of the academics of the University of Vienna, which can also be seen in the aforementioned indicators, 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 2009 and 2015 reveals a fluctuation in the total number of publications from academics of the University of Vienna, but with the figure remaining at a high level (2009: 8,439, 2015: 8,202). Here, 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, and there was also an increase in the top 25 % of publications in the Web of Science (see Diagram 1). The publications with peer review increased from 3,653 to 4,531 (+24,0 %). Peer review is of major importance in the academic world for assessing the suitability of an academic text for publication and assuring the quality of academic publications. Peer review has now become 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 publication media listed in the Web of Science increased from 1,924 (2009) to 2,339 (2015). The indexing in this, the biggest international publication database (publisher: Clarivate Analytics) represents a quality characteristic based on the criteria that have to be fulfilled by the publication media (including peer review). This increase in quality can be seen even more clearly in the 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. Between 2009 and 2015, these increased from 953 to 1,206 (+28,9 %).

The active 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 2011 and 2015 and their share among the total publications of academ-

ics from the University of Vienna in the Web of Science (see Diagram 2). The total number of publications with international co-authors increased from 1,581 to 1,862 (+15.4 %), the share of publications with international co-authors among all publications in the Web of Science increased from 58.93 % to 62.19 %. 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, there are gaps in particular in the social sciences and humanities

(SSH) subjects (see the section ‘The University of Vienna in an International Comparison’ below). Here – based on already existing initiatives at the University of Vienna (see, for example, the study on ‘Increased Visibility in the Social Sciences and the Humanities’, 2017) – efforts must be made in the next few years to push ahead with the development of extended valid indicators and criteria in order to make the visibility of the performance of all subjects represented at the University even more tangible.

Number of publications by the University of Vienna

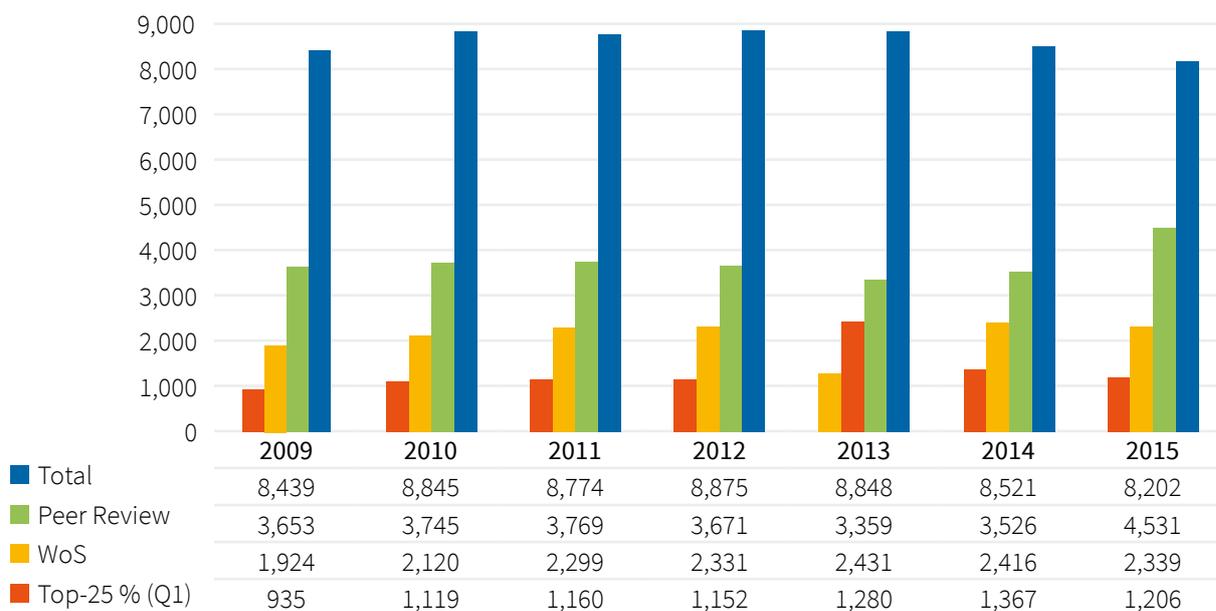


Diagram 1: Number of publications by the University of Vienna 2009–2015: total number, publications with peer review, number of publications in the Web of Science, top 25 % publications (Q1) in the Web of Science (source: u.cris, data as of August 2017).

Publications with international co-authors in the Web of Science

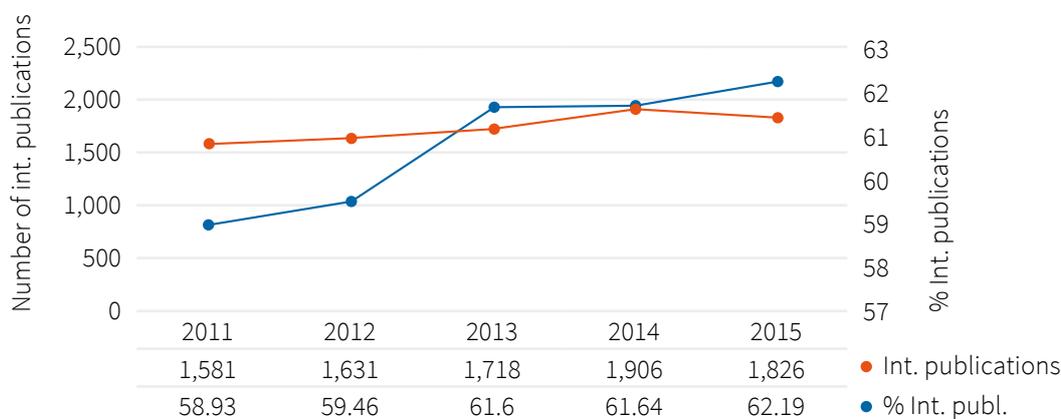


Diagram 2: Publications with international co-authors in the Web of Science (number and percentage of all journal articles in the Web of Science 2011–2015) (source: InCites, data as of July 2017).

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.

Cooperation projects of the University of Vienna ranked acc. to the share of top 10 % publications written by cooperating institutions in the Web of Science

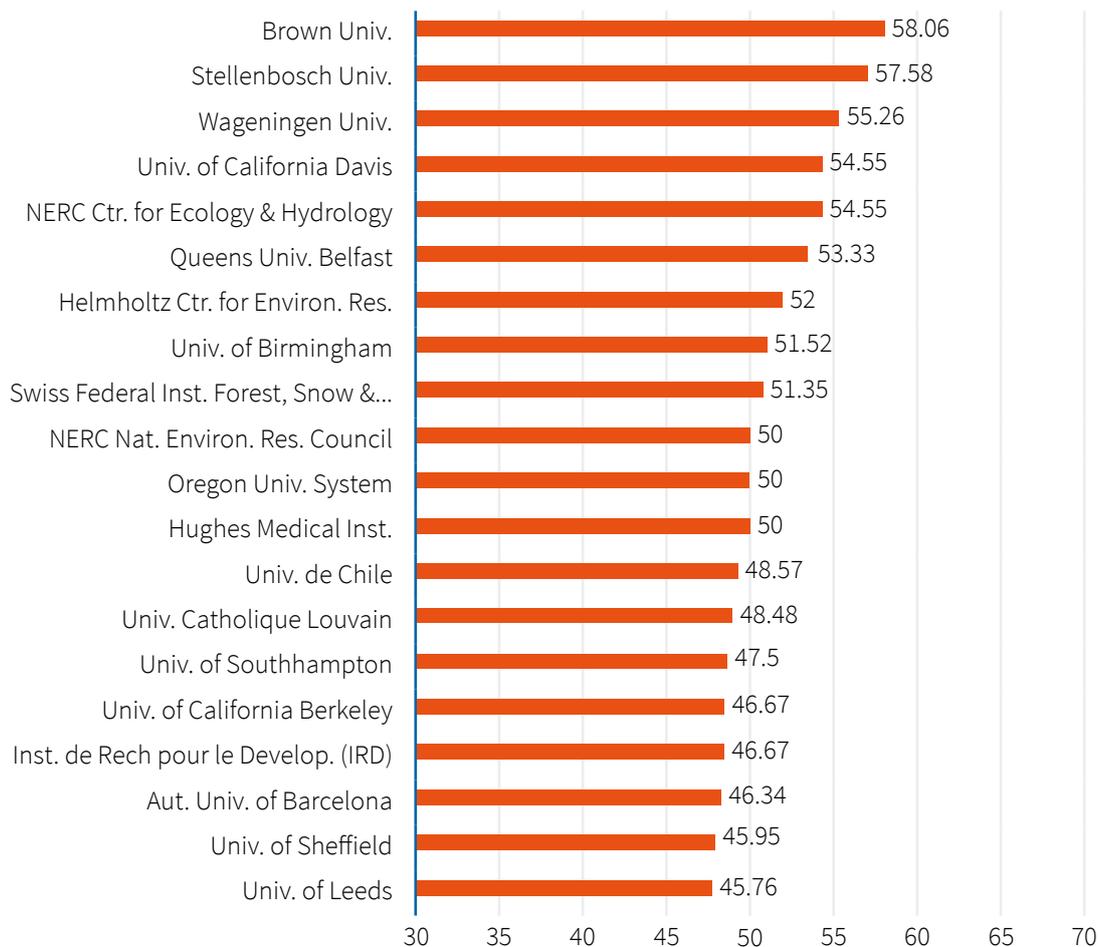


Diagram 3: Cooperation projects of the University of Vienna. The cooperating institutions were ranked according to the share of the top 10 % articles among the total publications written by the academics of the respective institution in the Web of Science (publication timeframe: 2011 to 2015). Only institutions with at least 30 joint publications were ranked. (Source: InCites, data as of July 2017).

A graphic presentation of co-authorships in InCites (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 and at the institutes of the Austrian Academy of Sciences), at other Austrian universities (in particular the Universities of Innsbruck and Graz) and at many renowned international universities (e.g. CalTech, University of California Berkeley, Harvard and Oxford).



Diagram 4: Graphic presentation of cooperation projects of the University of Vienna for the year 2015, based on the documents listed in the Web of Science with affiliation to the University of Vienna and other national and international institutions. The bigger the dot, 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 (Source: InCites, data as of August 2017).

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 proves that, in the period 2011–2015, 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)

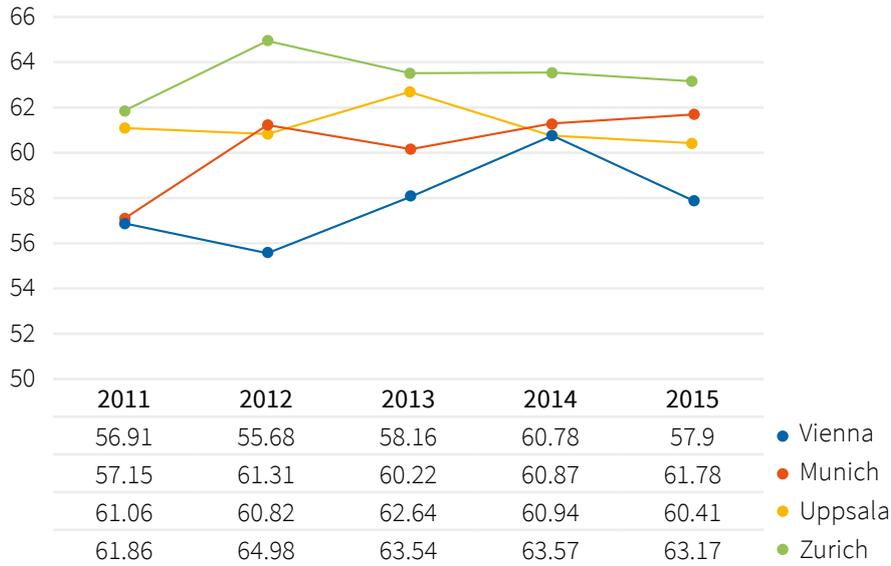


Diagram 5: Comparison of the development of the share of publications (Q1) in the publication period 2011–2015 (source: InCites, data as of July 2017).

Category Normalized Citation Impact

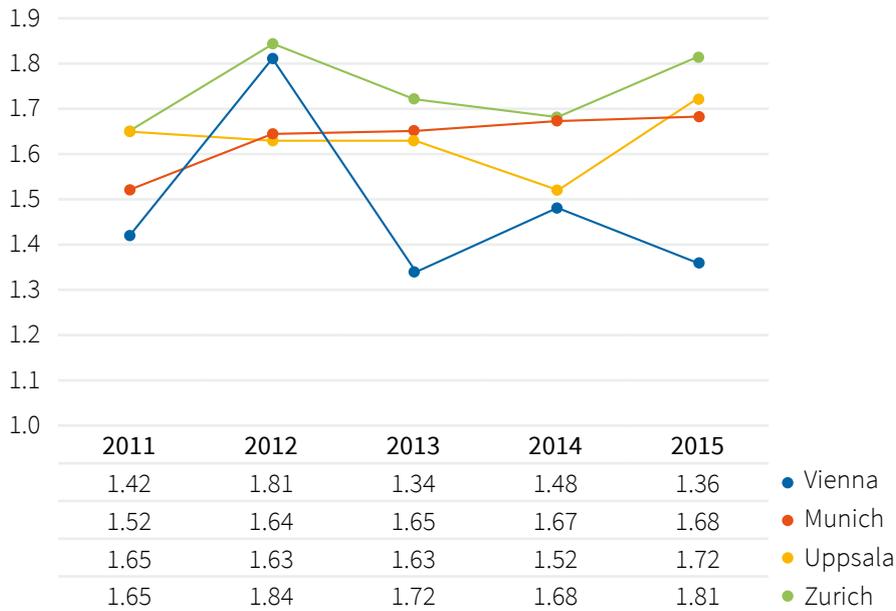


Diagram 6: Comparison of the development of the Category Normalised Citation Impact (CNCI) in the publication period 2011–2015 (source: InCites, data as of July 2017).

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 2017, for example, as many as 41 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 41 ERC grants, for

example, have a total approved project volume of approximately EUR 70 million. The ERC grants have been conferred on academics who are active in many different subject areas ranging from life sciences and quantum physics to mathematics 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 in particular:

University	Starting Grants	Advanced Grants	Consolidator Grants	Proof of Concept	Total
University of Vienna	21	14	5	1	41
LMU Munich	24	28	2		54
University of Uppsala	22	13	6	2	43
University of Zurich	20	20	6	1	47

Table 1: Number of ERC grants in the period from 2007 until August 2017 (source: European Research Council and database of the Research Services of the University of Vienna).

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 sub-disciplines. 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 (2017) mathematics comes in 37th place, communication sciences in 41st position and ecology in the 51-75 tier. In the Times Higher Education Ranking by subject (2016/2017; for the field of arts and humanities there are already results available for the 2018 ranking), the field of arts and humanities is in 41st place and the subject of business and economics is in 96th position, which is neck and neck with life sciences. A comparison with the Universities of Zurich, Munich and Uppsala shows that, in the current subject rankings, the University of Vienna is represented in much fewer subjects among the top 50 (Shanghai) and the top 100 (THE) (see Table 2).

University	Shanghai Global Ranking of Academic Subjects (top 50)	Times Higher Education Ranking by subject (top 100)
LMU Munich	7 (physics 23, biotechnology 29, biology 41, human biology 18, business and economics 42, communication sciences 21, remote sensing 14)	5 (arts and humanities 21, business, economics and management 30, life sciences 36, physics 22, social sciences 71)
University of Uppsala	5 (physics 36, ecology 50, pharmacy 27, political science 34, biotechnology 46)	3 (life sciences 40, physics 87, arts and humanities 98)
University of Zurich	8 (geography 24, remote sensing 13, biology 19, human biology 27, pharmacy 30, ecology 27, business and economics 35, communication sciences 23)	5 (arts and humanities 88, business, economics and management 45, life sciences 65, physics 61, social sciences 96)
University of Vienna	2 (mathematics 37, communication sciences 41)	3 (arts and humanities 41, business and economics 96, life sciences 96)

Table 2: 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 2017 (top 50)' and 'Times Higher Education Ranking by subject 2016-2017 (top 100)'. For the subject area 'arts and humanities', results of the 'THE World University Rankings by subject 2018' could already be used. The results of medical subjects were not included.

The University of Vienna is continuing to endeavour to be among the best 100 universities in the world in as many possible subjects. 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. In addition, frequent changes in the methodology used by the ranking providers and the inclusion of many new universities, in particular from the Asian region, mean that there are high fluctuations in ranking results. 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 2018, it can be seen that the University of Vienna, which is currently in position 165, does not come close to the University of Munich (34), the University of Uppsala (86) or the University of Zurich (136) 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 databas-

es (e.g. Web of Science, PubMed, Scopus). This has a directly positive effect on the bibliometric indicators of many rankings and therefore on the performance of the entire universities.

Including through existing cooperation projects with the Medical University of Vienna, such as the Max F. Perutz Laboratories or the joint inter-university research clusters (see chapter 3.3.3: National Cooperation), academics at the University of Vienna are also already very active in these areas. Strengthening the cooperation projects with the Medical University of Vienna could have a positive effect on future ranking results of the University of Vienna and improves the wellbeing of society.

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

2.2 Study and Teaching at the University of Vienna

In the winter semester of 2016/17 around 94,000 students were admitted to the University of Vienna, 95 % of them for degree programmes. 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 18 % of the degree programme students and 25 % of the newly enrolled students. Overall, the share of foreign students in the winter semester of 2016/17 was 26.9 %. 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 %.

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 120 extension curricula, which, as modules within a bachelor's programme, ensure the students receive an education in a wide range of subjects. 103 master's programmes, the teacher education programme in the bachelor's/master's structure with 27 subjects and one specialisation, 2 diploma programmes and 82 fields of doctoral research in 13 doctorate and PhD curricula round off the offer.

Spread of degree programmes across subject clusters

Number of filled degree programmes by degree programme groups in the corresponding semester	Winter semester 2013/14	Winter semester 2016/17	Change in percent
Theology	1,040	946	-9.9 %
Law	13,159	13,004	-1.2 %
Engineering sciences	1,172	1,614	+27.4 %
Social sciences, business and economics	9,187	9,024	-1.8 %
Arts and humanities	50,798	49,689	-2.2 %
Natural sciences	21,467	22,293	+3.7 %
Teacher education programmes	13,245	12,758	-3.8 %

Table 3: Number of enrolled degree programmes by degree programme groups, data reporting of universities based on the University Studies Evidence Act (UniStEV).

Almost 50 % of the studies are spread across the following ten degree programmes: Law, German Studies, Biology, History, Political Science, Mass Media and Communication Science, Philosophy, English and American Studies, Business Administration and Psychology.

The quantitative student-teacher ratios, a key figure calculated from the number of students who have taken a certain number of examinations in relation to the number of professors and equivalent teaching staff, sometimes differ greatly in the various fields of study; this concerns the beginning phase of studies in particular.

An unfavourable development of the student-teacher ratios can be seen in particular in the social science, law and natural science subjects. In the humanities, there is a big difference in the situation depending on the subject.

In the subject Mass Media and Communication Science (International Standard Classification of Education (ISCED) 'Journalism and Reporting'), for example, the University of Vienna has a student-teacher ratio of around 316 students who have taken a certain number of examinations per full-time equivalent (the guideline in the German-speaking area is 40²), in the subject Psychology the ratio is around 1:272 (guideline 1:35) and in the case of foreign languages it is around 1:84 (guideline 1:40).

Here the ratios have to be assessed according to the specific conditions for each subject: The definition of 'good' student-teacher ratios is very much dependent on the field of study. Deficient quantitative student-teacher ratios do not necessarily mean poor teaching quality. The goal of the University of Vienna is to continue to improve the student-teacher ratios. In addition to investments in staff in various categories,

² Final report of the Working Group on Capacity-Oriented University Funding from 21 December 2011; preliminary draft of the Federal Ministry of Science, Research and Economy (BMWF) for a university access regulation, August 2017, GZ. BMWFW-52.250/0117-WF/IV/6a/2017, https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Begut&Dokumentnummer=BEGUT_COO_2026_100_2_1402159.

investments in the infrastructure to expand and modernise the room and laboratory capacities are also necessary. These measures seem particularly necessary in those fields of study that are in great demand, e.g. foreign languages and chemistry.

Basically, the University of Vienna considers external funding as described on p. xx to be desirable. If this state funding is not in place, a system of moderate admission control is necessary in order to purposefully improve the student-teacher ratios while using all available capacities with the help of a scheme to distribute students throughout Austria. In particular the subjects with a very high number of students at the University of Vienna, e.g. social sciences, could benefit from this. Here it must be ensured that it remains possible for applicants to freely choose their desired degree programme. The funding of measures to improve the student-teacher ratios is made possible by implementing a new, indicator-based university funding model, combined with access regulations.

For the winter semester of 2021, the Austrian Universities' *Development Plan*³ is striving for 266,000 degree programme students (without doctoral candidates), and here the rises in the numbers of students in recent years will continue only to a minor extent or the numbers may even stagnate. Statistics Austria, based on the demographic developments up to 2020/21, calculates slight decreases in the number of new entrants. It remains to be seen whether this will be offset by the continuing stronger influx of students into post-secondary education and the international attractiveness of Vienna as an education location. If it becomes possible to shape these developments with regard to the University of Vienna by controlling the influx of students with corresponding legislation, an improvement of the student-teacher ratios is possible in the next few years, at least in some fields of study.

As a significant field of activity, the strengthening of the STEM fields and the increase in the shares of women in the STEM fields can be mentioned. There is now a relatively high level of success in addressing dedicated and interested students. Even if in the natural science subjects the personal student-teacher ratios still seem satisfactory in purely arithmetical terms, it is necessary to push ahead with other measures to improve the material and staff needed for practical laboratory work and research, and also with the creation of additional laboratory capacities and the improvement of working conditions.

At the University of Vienna, based on the respective legal foundations, one-, two- and three-stage procedures are applied before admission to degree programmes. Here either the suitability of the candidates is determined irrespective of the number of applicants or a set number of study places are allocated according to test results. If fewer candidates come to the test than there are places available, all present test participants are entitled to be granted admission to the degree programme.

An evaluation of the access regulations which was carried out in 2015/16 shows that, since the introduction of the admission procedures and aptitude tests with a two-stage procedure, the rate of students who have taken a certain number of examinations in the subjects where access is regulated has increased by 11 % and the share of people dropping out from studies since the introduction of the procedures has fallen by 6 %. So far the results of the evaluation confirm the suitability of the applied procedures and the effectiveness of the access regulations.

At the University of Vienna around 15,000 students begin a degree programme each year; after 4 years, around half of the students have dropped out and a 3-year bachelor's programme has been completed by only 18 % of students after 4 years. On average, a bachelor's programme at public universities in Austria lasted 8.0 semesters⁴ (University of Vienna: also 8.0 semesters⁵). A master's programme took an average of 5.6 semesters (University of Vienna: 5.8 semesters) to complete.

The long study duration and the large share of students who have not taken a certain number of examinations are, among other things, a consequence of various system factors that are influenced by the lack of staff in some areas and by the unregulated university access and the study law. Against the background of the high number of new entrants, the graduation rate is unsatisfactory and needs to be improved.⁶

An instrument to make the choice of studies easier and enhance the suitability for a chosen degree programme in terms of predictability for the new entrants and the University is the establishment of the introductory and orientation period (STEOP). The subject overview presented in this and the set performance requirements can be understood as a bridge towards successful study, and the University of Vienna is endeavouring to continue to develop this period according to its requirements.

3 BMWFW (2015), The Austrian Universities' Development Plan 2016-2021. Vienna.

4 Academic year 2014/15. Source: BMWFW, Statistisches Taschenbuch (Statistical Yearbook) 2016, Table 4.8.

5 Average of the academic years 2012/13 to 2014/15. Source: Wissensbilanz (intellectual capital report) 2015 of the University of Vienna, key figure 2.A.3.

6 Martin Unger, u. a. (2017): Studienverläufe und Studienzufriedenheit – Zusatzbericht der Studierenden-Sozialerhebung 2015, Studie im Auftrag des Bundesministeriums für Wissenschaft, Forschung und Wirtschaft (BMWFW). Vienna, Institute for Advanced Studies (IHS).

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 30 % of all students at Austrian universities, around 29 % of students who have taken a certain number of examinations and also around 28 % of completed degrees. If, in this approach, we exclude the medical and technical universities and the universities of arts on account of their specific

orientation, the share of the University of Vienna increases by 7-10 percentage points. If we extend the approach to cover the budgetary component, it can be seen that the University of Vienna, compared with all public universities in Austria, has the lowest value in the key figure 'Global budget per student' (see Diagram 7, which compares only universities with a similar range of subjects to those at the University of Vienna). The ratios in the global budget per graduate are similar (see chapter 2.3: Financial Starting Point of the University of Vienna). When examined for the whole of Austria, the average of this key figure is EUR 11,777.

Global budget/student

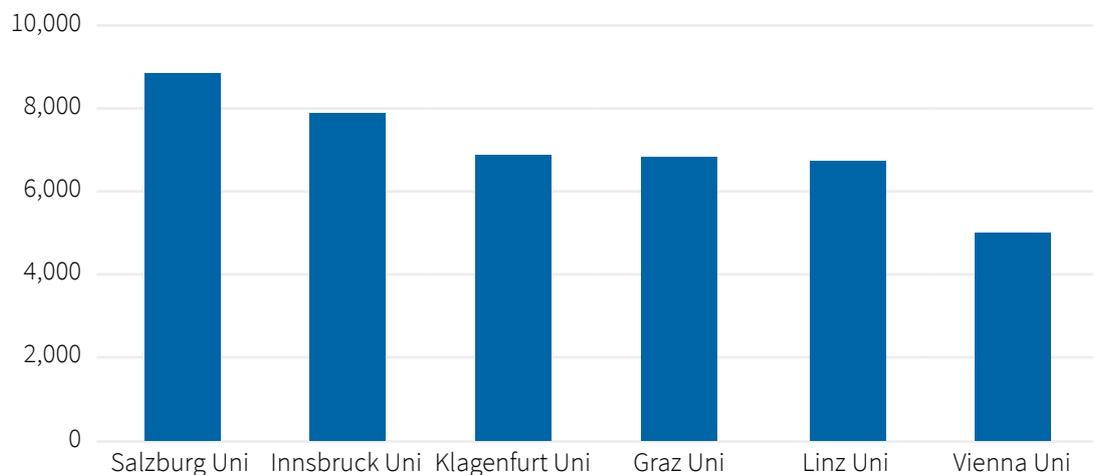


Diagram 7: Global budget per student 2013–2015, selected universities, Federal Ministry of Science, Research and Economy (BMWFW), Statistisches Taschenbuch (Statistical Yearbook) 2016, p. 121.

The low global budget of the University of Vienna compared with other Austrian universities clearly shows the financial disadvantage of the University of Vienna. The special position of the University of Vienna as a university with a wide range of degree programmes in a particularly attractive city in the Austrian and also European higher education landscape, which leads to increased interest on the part of new entrants, must not lead to the financial disadvantage of the University.

In the academic year 2015/16, more than 10,000 degree programmes were completed at the University of Vienna (cf. Diagram 8). This – after the academic years 2012/13 and 2011/12, in which there was a record number of graduations on account of expiring degree programmes – represents the third highest figure in the history of the University of Vienna. The number of first degrees in the academic year 2015/16 remained almost the same as in the previous year. However, the number of completed master's degrees rose by more than 25 % in the same period to around 2,100 and accounts for 21 % of all completed degrees.

Completed degrees

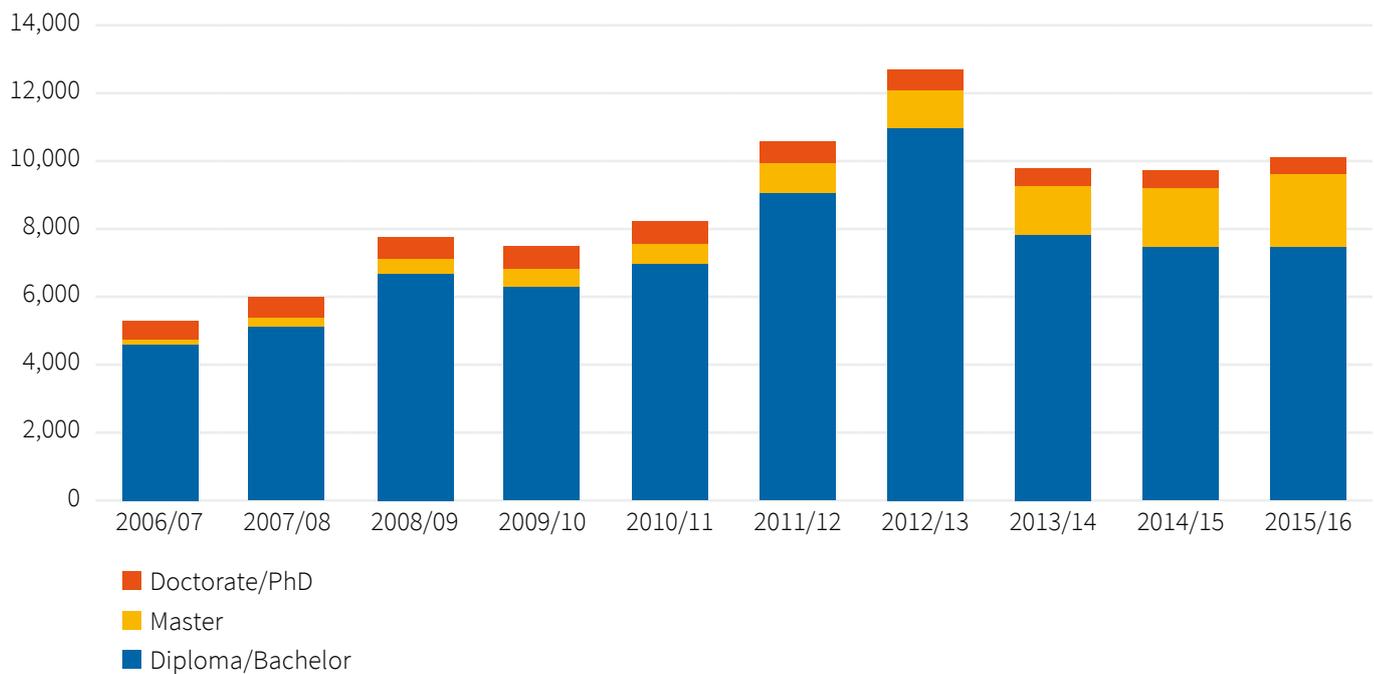


Diagram 8: Completed degrees. The peak values in the academic year 2012/13 and in the academic year before are the result in particular of the phasing out of many diploma programmes in the relevant period.

The University of Vienna endeavours to do all it can to improve the quantitative student-teacher ratios. It is a good idea to implement the measures only as part of a strategy for the whole of Austria, however, and here, not least for the use of the capacities throughout the country, necessary controlling options need to be established. With more than 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 implementation of teaching capacity-based funding, the University could make another big step towards improving the quality of student-teacher ratios. In the long term, only the 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) ('state funding'), can lead to a lasting improvement of the degree programme and research situation. Measures have to be taken to ensure that admission control measures do not lead to social exclusions.

2.3 Financial Starting Point of the University of Vienna

Financial framework conditions

In the work programme for the period 2013–2018 the Federal Government set the goal of providing 2 % of GDP for tertiary education establishments⁷. Currently this indicator, according to relevant OECD figures, is at 1.7 %⁸. It contains public and private education spending, covers the entire range of tertiary educational establishments (incl. short tertiary programmes) and also includes R&D expenditure at universities, for example. The share of private education spending in Austria is, at 0.1 % of GDP, very low and is clearly below the OECD average of 0.5 % and the EU average of 0.3 %⁹.

In Austria, tertiary educational establishments are therefore mostly financed by public funds. To reach the Federal Government's 2 % target, considerable efforts and additional public funds are required, so an increase in private education contributions (e.g. tuition fees) seems unlikely in view of the developments in recent years. This concerns the higher education sector in particular, which receives around two thirds of tertiary education spending. The share of the higher education budget in GDP has remained constant

⁷ Arbeitsprogramm der österreichischen Bundesregierung 2013–2018 (Work programme of the Austrian Federal Government 2013–2018), p. 44.

⁸ OECD, Education at a Glance 2016, Chapter B (in particular indicators B2 and B3), p. 224 et seqq.

⁹ OECD, Education at a Glance 2016, indicator B2.3, p. 262.

in recent years with a figure of 1.19 % (2016). In relation to federal spending, too, the share of the higher education budget has risen only slightly from 5.21 % (2010) to 5.38 % (2016).

	2010	2011	2012	2013	2014	2015	2016	% 2010/16
Nominal GDP (EUR in billions)	294.627	308.630	317.056	322.878	329.296	337.286	348.912	18.4 %
Federal spending (EUR in billions)	67.287	67.814	72.881	75.567	74.653	74.589	77.026	14.5 %
Higher education budget (EUR in billions)	3.505	3.545	3.651	3.786	3.855	3.981	4.144	18.2 %
of which for universities	2.982	3.007	3.089	3.189	3.237	3.303		
Share of higher education budget in GDP	1.19 %	1.15 %	1.15 %	1.17 %	1.17 %	1.18 %	1.19 %	
Share of higher education budget in federal spending	5.21 %	5.23 %	5.01 %	5.01 %	5.16 %	5.34 %	5.38 %	
Share of university budget in GDP	1.01 %	0.97 %	0.97 %	0.99 %	0.98 %	0.98 %		
Share of university budget in federal spending	4.43 %	4.43 %	4.24 %	4.22 %	4.34 %	4.43 %		

Source: Federal Ministry of Science, Research and Economy (BMWFV), Statistisches Taschenbuch (Statistical Yearbook) 2014 and 2016, in each case p. 87
Data source for GDP: 2010-15 Statistics Austria, calculated according to ESA 2010, as of May 2016; 2016 Austrian Institute of Economic Research (Wifo) economic forecast in June 2016

Data source for federal spending and higher education/university budget: 2011-15 closing statements of the Federation; 2016 federal budget estimate

Table 4: Development of GDP, federal spending, higher education budget, university budget (for the whole of Austria).

In absolute figures, federal spending for the university higher education budget has continued to grow in recent years, and in the period 2010–2015 it rose by 10.8 %, i.e. by EUR 0.3 billion to EUR 3.3 billion. At the same time, however, the consumer price index (CPI) rose by 13.1 % in the same period, i.e. with the increase in federal spending for universities it was not even possible to cover the general consumer price increase. This is of particular relevance for universities because essential cost blocks such as staff or rent costs are oriented towards the consumer price index.

The share of the university budget among federal spending remained constant in the period 2010–2015. In the performance agreement period 2016–2018 the university budget is increasing to a similar extent as in the previous years and will cover the annual inflation rate. Only from 2019, based on the parliamentary decision from the end of June 2017, is it expected that the federal funds for universities will be increased to an above average extent.

Under these framework conditions of stagnating public funding in real terms, the universities, with slightly increasing student numbers, have to produce considerably higher graduation figures.

Universities	2010	2011	2012	2013	2014	2015	% 2010/15
Federal spending / higher education budget / universities (EUR in billions)	2.982	3.007	3.089	3.189	3.237	3.303	10.8 %
Students in degree programmes	265,030	272,061	275,523	273,280	277,508	280,445	5.8 %
Average spending per degree programme student (EUR)	11,252	11,051	11,213	11,670	11,664	11,777	4.7 %

Source: Federal Ministry of Science, Research and Economy (BMWF), Statistisches Taschenbuch (Statistical Yearbook) 2014 and 2016, in each case p. 87
Data source for students: uni:data (BMWF higher education statistics information system), in each case the winter semester

Universities	2010	2011	2012	2013	2014	2015	% 2010/15
Federal spending / higher education budget / universities (EUR in billions)	2.982	3.007	3.089	3.189	3.237	3.303	10.8 %
Graduates at universities	27,926	31,115	34,460	37,312	34,300	34,539	23.7 %
Average spending per university graduate (EUR)	106,788	96,627	89,651	85,476	94,367	95,622	-10.5 %

Source: BMWFW, Statistisches Taschenbuch 2014 and 2016, in each case p. 87
Data source for graduates: uni:data (BMWF higher education statistics information system), in each case the academic year, e.g. 2015: academic year 2014/15

Table 5: Development of university budget and students in degree programmes (for the whole of Austria).

Table 6: Development of university budget and graduates (for the whole of Austria).

The budget of the University of Vienna, in comparison with the overall budget for the university sector, has risen to an above average extent since 2010. This is in particular due to the introduction of the structural funds for the higher education area as a component of higher education funding starting in 2013. With this financing component, need and performance indicators such as the development of students who have taken a certain number of examinations, graduates and third-party funds are taken into account in particular. Thanks to this above-average budget growth, the global budget provided by the Federal Government per degree programme student in the period 2010–2015

rose by 8.9 % but, with a figure of EUR 4,782 per degree programme student (2015), is clearly below the average for all Austrian universities of EUR 11,777 (2015). In line with the trend throughout Austria, in recent years there has also been considerable growth in the number of graduates at the University of Vienna: At the University of Vienna the number of graduates in the period 2010–2015 increased by around 30 % to 9,719 (2015), while the increase in the graduation figures for the whole of Austria in the same period was around 24 %. The University of Vienna is therefore responsible for more than 28 % of graduations.

University of Vienna	2010	2011	2012	2013	2014	2015	% 2010/15
Global budget of Federal Government (EUR in millions)	372.2	377.6	390.3	429.5	426.1	428.4	15.1 %
Students in degree programmes	84,745	87,986	88,461	87,852	88,441	89,602	5.7 %
Budget per degree programme student (EUR)	4,393	4,292	4,412	4,888	4,818	4,782	8.9 %

Data source for global budget of Federal Government: closing statements 2010-15, global budget excl. UZA II, plus tuition fee reimbursements
Data source for students: uni:data (BMWF higher education statistics information system), in each case the winter semester

University of Vienna	2010	2011	2012	2013	2014	2015	% 2010/15
Global budget of Federal Government (EUR in millions)	372.2	377.6	390.3	429.5	426.1	428.4	15.1 %
Graduates	7,494	8,214	10,550	12,682	9,740	9,719	29.7 %
Budget per graduate (EUR)	49,672	45,971	36,992	33,864	43,746	44,084	-11.3 %

Data source for global budget of Federal Government: closing statements 2010-15, global budget excl. UZA II, plus tuition fee reimbursements
Data source for graduates: uni:data (BMWF higher education statistics information system), in each case academic year, e.g. 2015: academic year 2014/15

Table 7: Development of university budget and students in degree programmes (for the University of Vienna).

Table 8: Development of university budget and graduates (for the University of Vienna).

In the area of research, the Austrian GDP spending for research and experimental development (R&D) is clearly above the European figures. The last available comparison year 2015 shows a figure of 3.07 % for Austria, while the average figure for the EU (28) is 2.03 %. Austria is therefore among the leaders in Europe behind Sweden (3.26 %) and ahead of Denmark (3.03 %), Finland (2.90 %) and Germany (2.87 %). In Austria, the R&D spending is concentrated on the corporate sector: Around 70 % of research and development spending is in companies; only around one quarter of R&D expenditure is invested via the higher education sector.

The Federal Government has set the goal of a research quota of 3.76 %¹⁰ in 2020. Since 2015 the research quota has risen slightly to 3.12 % (2016) and 3.14 % (estimate for 2017), but considerably higher funds are required to achieve the goal. For this reason, in November 2016 the Council of Ministers adopted a ‘research billion’, which, in particular, foresees the strengthening of basic research, including a considerable increase in the funding volume of the FWF. 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.”¹¹

The legal implementation of the research billion, in particular its specification in the federal budgetary framework law (Bundesfinanzrahmengesetz), is still open in mid-2017. An increase in FWF funds is, in an international comparison, advisable in any case. As FWF calculations show, the FWF receives budget funds of around EUR 24 per inhabitant per year, while the budgets of comparable funding organisations have much higher funding: Switzerland (EUR 97), Finland (EUR 76), the Netherlands (EUR 51) and Germany (EUR 37).

At Austrian universities, an increase in FWF funds would lead to a positive development of basic research, in particular in the area of third party-funded research projects. Third party-funded research can already look back on a considerable increase in recent years: In the period 2010-2015 the third party-funding of Austrian universities, at 22.9 %, increased more than twice as fast as the universities’ global budgets:

Universities	2010	2011	2012	2013	2014	2015	% 2010/15
Federal spending / higher education budget / universities (EUR in billions)	2.982	3.007	3.089	3.189	3.237	3.303	10.8 %
Third-party funds / revenue from R&D projects (EUR in billions)	0.528	0.544	0.585	0.594	0.632	0.648	22.9 %
Ratio of third-party funds / federal spending	17.7 %	18.1 %	18.9 %	18.6 %	19.5 %	19.6 %	

Source for federal spending: Federal Ministry of Science, Research and Economy (BMWFW), Statistisches Taschenbuch (Statistical Yearbook) 2014 and 2016, in each case p. 87
Data source for third-party funds: BMWFW, Statistisches Taschenbuch 2013, 2014 and 2016, p. 101 and p. 102 respectively, data excludes Danube University Krems

University of Vienna	2010	2011	2012	2013	2014	2015	% 2010/15
Global budget of Federal Government (EUR in millions)	372.2	377.6	390.3	429.5	426.1	428.4	15.1 %
Third-party funds / revenue from R&D projects (EUR in millions)	66.2	71.3	76.7	76.7	79.2	80.4	21.5 %
Ratio of third-party funds / global budget of Federal Government	17.8 %	18.9 %	19.6 %	17.9 %	18.6 %	18.8 %	

Data source for global budget of Federal Government: closing statements 2010-15, global budget of Federal Government excl. UZA II, plus tuition fee reimbursements
Data source for third-party funds: Intellectual Capital Reports 2010-15, key figure 1.C.2

Table 9: Development of university budget and third-party funding (for the whole of Austria).

Table 10: Development of university budget and third party-funding (for the University of Vienna).

¹⁰ Arbeitsprogramm der österreichischen Bundesregierung 2017/18 (Work programme of the Austrian Federal Government 2017/18), p. 44 et seq.
¹¹ Research and Innovation Observatory (RIO) Country Report Austria 2016, p. 4.

The third-party funding contains competitively acquired basic research projects funded by the FWF, EU or other (funding) organisations, but also application-oriented research projects commissioned, for instance, by companies. In the area of third-party funding, the University of Vienna has so far focused on basic research; with an increase in third-party funding of 21.5 % in the period 2010–2015, the University of Vienna is only slightly below the average of all universities. Throughout Austria and also at the University of Vienna the increase flattened out in 2015. This is also due to the fact, for instance, that there was a decrease in the FWF funding volume (and therefore the chances of success), and also the current outgoing payments in 2015 in comparison with the previous years, and the FWF overhead payments were gradually stopped. Although around half of third-party funds at the University of Vienna are FWF-financed, this decline was able to be offset by other funding sources. However, in view of the importance of FWF and also EU funds in the field of third-party funding for non-basic research, there is need for intensification.

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 not identical. Trends appear with such comparisons even if these are only rough comparisons.

In comparison with the entire higher education budget for the university sector of EUR 3.3 billion (2015), the University of Vienna has 13 % of the funds. After eliminating certain special items (in particular additional clinical expenditure), the higher education budget for universities amounts to around EUR 2.8 billion. 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 Ac. year 2014/15		Graduations Ac. year 2014/15		Federal funds 2015 (EUR in millions)	
Total	181,657	100.0 %	3,539	100.0%	2,818	100.0 %
University of Vienna	53,115	29.2 %	9,719	28.1 %	428	15.2 %
University of Graz	19,119	10.5 %	3,486	10.1 %	187	6.6 %
University of Innsbruck	18,276	10.1 %	3,981	11.5 %	216	7.7 %
University of Salzburg	9,467	5.2 %	1,891	5.5 %	123	4.3 %
University of Linz	9,907	5.5 %	1,718	5.0 %	121	4.3 %
University of Klagenfurt	5,403	3.0 %	1,257	3.6 %	60	2.1 %
Medical universities	9,536	5.2 %	1,600	4.6 %	591	21.0 %
Technical universities	26,894	14.8 %	5,089	14.7 %	448	15.9 %
Universities of arts	8,072	4.4 %	1,507	4.4 %	284	10.1 %
Other universities	21,870	12.0 %	4,291	12.4 %	361	12.8 %

Source: Federal Ministry of Science, Research and Economy (BWF), Statistisches Taschenbuch (Statistical Yearbook) 2016, p. 34 (active students = students who have taken a certain number of exams), p. 63 (graduations) and p. 89 (federal funds)

Table 11: Degree programmes in which students took a certain number of examinations, graduations and federal funds.

The student-teacher ratios clearly reflect this imbalance between budget funds and the number of students: At the University of Vienna this is 219.7 students per professor 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 2015			Academic year 2014/15		
	absolute	per prof.	per teacher	absolute	per prof.	per teacher
Total	280,445	121.2	21.2	175,891	76.0	13.3
University of Vienna	89,602	219.7	39.6	50,545	123.9	22.3
University of Graz	27,458	165.1	29.6	18,944	113.9	20.4
University of Innsbruck	27,781	126.5	26.5	17,216	78.4	16.4
University of Salzburg	14,744	111.8	21.0	9,218	69.9	13.1
University of Linz	18,036	158.6	28.7	9,637	84.7	15.3
University of Klagenfurt	8,478	132.5	23.1	5,108	79.8	13.9

Source: Federal Ministry of Science, Research and Economy (BMWFW), Statistisches Taschenbuch (Statistical Yearbook) 2016, p. 120. Active students = students who have taken a certain number of exams

Table 12: Degree programme students and students who have taken a certain number of examinations in absolute figures and also per professor and teacher.

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 2013-15	
	per student	per graduate
University of Vienna	4,966	41,086
University of Graz	6,794	54,472
University of Innsbruck	7,870	54,244
University of Salzburg	8,806	64,713
University of Linz	6,704	73,105
University of Klagenfurt	6,856	47,433

Source: Federal Ministry of Science, Research and Economy (BMWFW), Statistisches Taschenbuch (Statistical Yearbook) 2016, p. 121

Table 13: Average federal spending per student and per graduate. On account of different definitions, there are slight differences to the values in Table 7 and Table 8.

In third party-funded research, Austrian universities have had considerable increases since 2010: In total, the third-party funds have risen by EUR 136.9 million or 25.2 %. The increase at the University of Vienna is, at 19.3 %, slightly below the average but is higher than at other com-

prehensive universities. However, the growth in third-party funds at the University of Vienna has flattened since 2014, while at the medical and, above all, the technical universities the volumes of third-party funds have continued to grow.

University (EUR in millions)	2010	2011	2012	2013	2014	2015	2016	% 2010/16
University of Vienna	66.2	71.3	76.7	76.7	79.2	80.4	80.0	20.8 %
University of Graz	21.6	19.7	21.5	22.5	25.7	27.6	25.0	15.4 %
University of Innsbruck	36.5	35.7	38.0	40.7	49.0	38.9	43.7	19.7 %
University of Salzburg	22.9	18.1	21.5	19.6	22.1	22.8	24.0	4.9 %
University of Linz	28.4	30.8	37.2	36.3	35.2	34.2	31.4	10.7 %
University of Klagenfurt	9.0	8.9	8.7	10.4	7.3	8.9	7.4	-17.6 %
Medical universities	144.7	153.7	162.4	152.5	163.3	169.1	171.8	18.7 %
Technical universities	144.7	146.0	153.3	163.7	174.1	184.3	191.7	32.5 %
Universities of arts	5.0	5.9	6.6	7.1	7.3	8.2	8.6	72.6 %
Other universities	45.8	54.2	59.3	64.4	68.8	73.9	78.1	70.5 %
Total	524.9	544.2	585.1	593.9	632.0	648.3	661.8	26.1 %

Source: Intellectual Capital Reports 2010-16, key figure 1.C.2 or now 1.C.1, data excludes Danube University Krems

Table 14: Development of third-party funds.

An analysis of the third-party funds by funding authority/client (for methodological reasons only from 2011) shows a higher dynamic with application-oriented funding authorities/clients while basic research-oriented funding authorities have lower growth rates. In comparison

with 2011, Austrian universities in 2016 obtained 28.5 % more funds from companies and 38.1 % more funds from the Austrian Research Promotion Agency (FFG), while in the same period the third-party funds from the FWF increased by 23.4 % and from the EU by 26.5 %.

Funding authorities/clients (EUR in millions)	2011	2012	2013	2014	2015	2016	% 2011/16
Companies	126.4	129.8	155.0	157.7	160.0	162.5	28.5 %
FWF	128.4	137.9	149.2	158.7	159.8	158.4	23.4 %
EU	66.7	81.3	82.6	79.4	81.8	84.5	26.5 %
FFG	49.4	53.9	50.7	57.8	60.7	68.2	38.1 %
Other funding authorities/clients	173.3	182.2	156.5	178.5	186.1	188.2	8.6 %
Total	544.2	585.1	593.9	632.0	648.3	661.8	21.6%

Source: Intellectual Capital Reports 2011-16, key figure 1.C.2 or now 1.C.1, data excludes Danube University Krems

Table 15: Development of third-party funds by funding authority/client (for the whole of Austria).

In addition to its commitment to basic research, the University of Vienna also strives to increase application-oriented, third party-funded projects and FFG projects. In both categories there are

above-average growth rates, but corresponding initiatives are going to be strengthened, however (see chapter 3.1.1: Research).

University of Vienna (EUR in millions)	2011	2012	2013	2014	2015	2016	% 2011/16
Companies	2.8	3.1	3.5	2.9	3.0	3.4	20.6 %
FWF	35.9	38.1	40.5	41.0	40.0	38.7	7.8 %
EU	11.3	13.2	13.1	13.6	12.8	14.4	27.3 %
FFG	1.1	1.4	1.1	2.2	2.1	1.8	62.3 %
Other funding authorities/clients	20.1	20.7	18.5	19.5	22.5	21.7	7.9 %
Total	71.3	76.7	76.7	79.2	80.4	80.0	12.3 %

Source: Intellectual Capital Reports 2011-16, key figure 1.C.2 or now 1.C.1

Table 16: Development of third-party funds by funding authority/client (for the University of Vienna).

Although the importance of the FWF has decreased slightly in recent years, the FWF remains by far the most important provider of third-party funds for the University of Vienna. On average over recent years, the University of Vienna has

received around 25 % of the FWF funds granted to Austrian universities. However, an analysis by outpayments shows that other universities have higher rates of increase than the University of Vienna.

FWF funding total (EUR in millions)	2011	2012	2013	2014	2015	2016	% 2011/16
FWF funding total (EUR in millions)	195.2	196.4	202.6	211.4	199.3	183.8	-5.8 %
of which: universities	169.1	158.6	173.9	179.4	166.4	152.3	-9.9 %
of which: University of Vienna	39.2	42.3	37.8	42.0	50.3	35.5	-9.4 %
Share of University of Vienna / universities	23.2 %	26.7 %	21.7 %	23.4 %	30.2 %	23.3 %	

Source: FWF Annual Reports 2011-2016, new funding total includes extensions but excludes supplementary grants

Table 17: Funding totals of the FWF.

The high significance of basic research for the University of Vienna can be seen not only in the University's share of FWF funds but also in the fact that the University of Vienna, in a comparison with other universities, has acquired by far the most ERC grants. These successes have become possible despite the suboptimal framework conditions. In the future, beginning with a further strengthening of basic research-oriented projects, application-oriented research will also be intensified.

University of Vienna in an international comparison

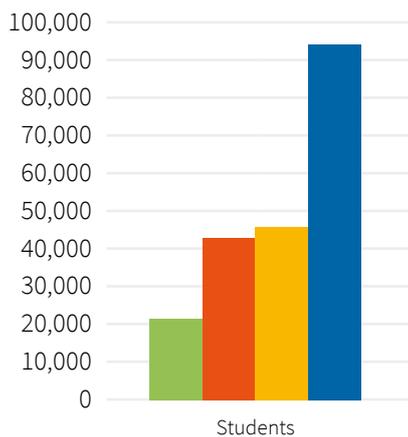
The University of Vienna compares internationally with the University of Zurich, the LMU Munich and the University of Uppsala (see chapter 2.1: Research at the University of Vienna).

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/graduate.

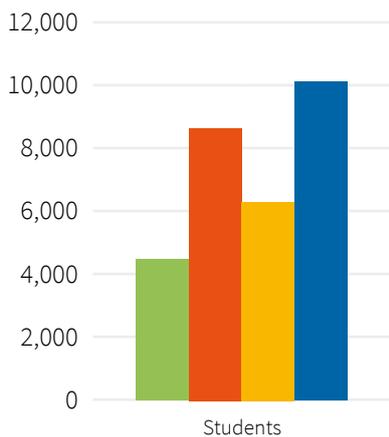
A problem of the Austrian university system can be seen for the University of Vienna, for example, in a comparison of the global budget available per student and per graduate: While at the University of Zurich, for example, there are around five times more funds available per student, this ratio is halved for graduates with a figure of around 2.6.

It is a similar case at the two other compared universities. This shows that better funding leads to a clearly lower drop-out rate.

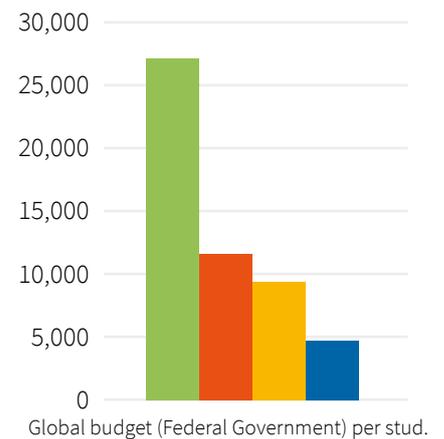
Students



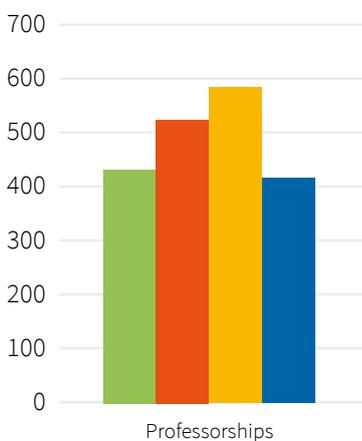
Graduations



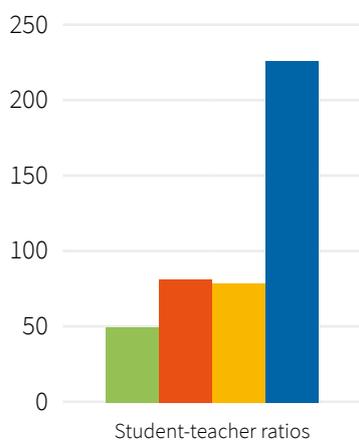
Global budget per degree programme student (in EUR)



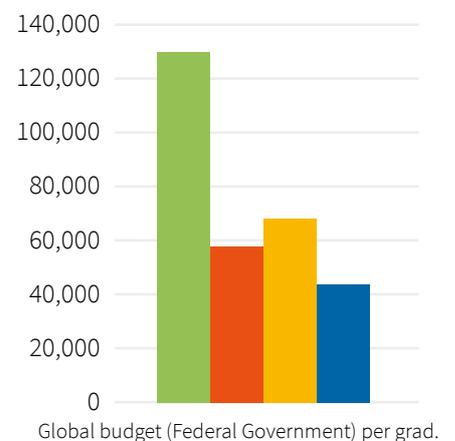
Professorships



Student-teacher ratios: stud./prof.



Global budget per grad. (in EUR)



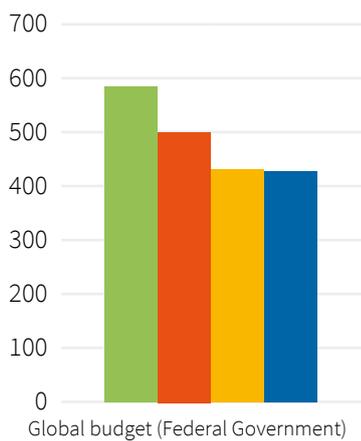
Legend: Zurich Uni (green), LMU/Munich (orange), Uppsala Uni (yellow), Vienna Uni (blue)

Diagram 9: Comparison of the University of Zurich (2016), the LMU Munich (2015), the University of Uppsala (2016) and the University of Vienna (2015/16). University of Zurich and University of Munich without medicine, University of Uppsala with medicine.

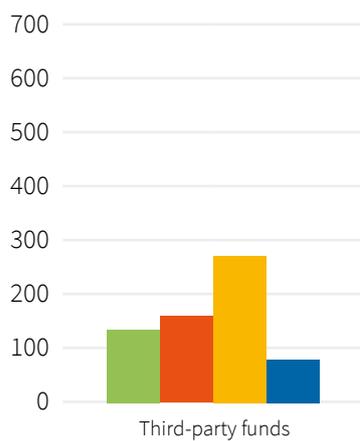
The framework conditions for research are very different in an international comparison, which can be seen, in particular, in a comparison of the funding volume of the national research funding organisations. As already indicated, the funding volume of the FWF is much lower in comparison with other national European funding organisations. Since third party-funded research is very much 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, attracts a smaller amount of third-party funds than the compared universities in Zurich, Munich and Uppsala. While at the University of Vienna only around 16 % of the total revenue comes from third-party funds, at the University of Zurich this figure is approximately 19 % and at the LMU Munich around 24 % (without medicine/veterinary medicine). At the University of

Uppsala – with the Faculty of Medicine included – more than one third of the revenue comes from third-party funds, and here the specific structure of Swedish research funding has to be taken into consideration: In addition to four large state-financed funds, there are powerful large private foundations such as the Wallenberg Foundation.

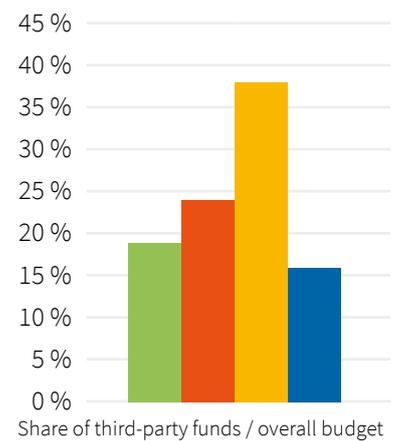
Global budget (EUR in millions)



Third-party funds (EUR in millions)



Share of third-party funds / overall budget



■ Zurich Uni ■ LMU/Munich ■ Uppsala Uni ■ Vienna Uni

Diagram 10: Comparison of the budgets and budget structure of the University of Zurich (2016), the LMU Munich (2015), the University of Uppsala (2016) and the University of Vienna (2015). University of Zurich and University of Munich without medicine, University of Uppsala with medicine.

Since the list of acquired third-party funds (Diagram 10) includes the Faculty of Medicine at the University of Uppsala, for the sake of completeness the corresponding figures for Munich and

Zurich (incl. medicine) and, for the Vienna location, for the University of Vienna and the Medical University of Vienna are indicated:

University	Third-party funds in 2015 (in million euros)	Vienna location (in million euros)
University of Zurich (incl. medicine)	269	
University of Munich (incl. medicine)	235	
University of Uppsala (with medicine)	269	
University of Vienna	80	164
Medical University of Vienna	84	

Table 18: Comparison of the acquisition of third-party funds in 2015 (incl. medicine).

Teaching capacity-based funding connected with basic funding of research

The University of Vienna welcomes the introduction of capacity-oriented, student-related university financing in line with the objectives of the law decided at the end of June 2017. The new university financing pays greater consideration to the demands of students and the capacities and performance in research. Combined with fair control of access in subjects with particularly high numbers of students, a new system of university funding would create much better prerequisites for research and teaching at the University of Vienna.

The University of Vienna plans to implement this *Development Plan* from funds of the new university financing scheme. The scheduled professorships and the further promotion of tenure track positions aim, on the one hand, to improve the student-teacher ratios in subjects with unfavourable ratios and, on the other hand, to strengthen the STEM fields in particularly promising areas and the links between different subjects. Depending on the need of the individual faculties and degree programmes, funds from the new university financing scheme will also be invested in other staff categories.

In addition, investments also need to be made in the infrastructure: on the one hand construction measures (including room and equipment infrastructure for the additional professorships foreseen in this *Development Plan*), on the other hand infrastructure measures in the existing academic area (state-of-the-art infrastructure).





3. Implementation of Core Tasks

3.1 Research and Career Development of Young Academics

3.1.1 Research

Research as a driving force for development

Research represents a key driving force for development at the University of Vienna. It stimulates quality-oriented teaching, it creates the prerequisites for technological and social innovations and it leads to critical reflection on generally accepted knowledge. A university without research would be quickly reduced to an educational establishment in which, actually, only the knowledge that is already outdated is reproduced and which produces no innovational stimuli for the economy and society. Current findings in research have a direct effect on research-led teaching and enable the education of innovative young people for the economy and society. However, results from research are also foundations for economically and socially relevant innovations and new interpretations of existence of people and societies. Via research as a driving force for development, universities make their important contribution to maintaining the future viability of a country.

The University of Vienna sees itself as a strongly research-oriented university of high international visibility (see chapter 2.1: Research at the University of Vienna). Its research achievements, measured by the publications in renowned journals and book publications or by the received

volume of third-party funding, have improved in recent years even if, in the area of third-party funds, there is still need to catch up in terms of application-oriented third party-funded research (e.g. FFG, Christian Doppler Research Association (CDG) and commissioned research). Relevant subject rankings show 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 (see chapter 2.1: Research at the University of Vienna).

In recent years, the University of Vienna has also invested specifically in strongly research-oriented disciplines. It has professionalised the central services to support research and, overall, has endeavoured to support the researchers so that carrying out a research contract does not become a burden but, instead, is a meaningful task.

To ensure that research as a driving force for development runs optimally, additional third-party funds are important for carrying out research projects and for funding the career development of young academics. Adequately equipped national or international funding authorities, which can offer reasonable prospects of success, 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 will be 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 and groups of researchers can succeed. The University of Vienna therefore also

views the successful acquisition of third-party funds, in particular projects 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. On the one hand state-of-the-art basic equipment is required in order to carry out the necessary preparatory work and be able to make competitive applications, on the other hand third party-funded projects – if (as in most cases) the full costs are not covered, only the additional funds relevant for research with an overhead contribution – lead to costs which have to be covered by the basic budget.

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. It is nevertheless necessary to focus on the question of what the University of Vienna stands for in a special way and which research areas need to be emphasised. This question is relevant for the public image, for the correct adjustment of the self-perception and for resource decisions.

Profile development is, for logical reasons, based on analytically working out the existing profile strengths and new academic questions as well as resource decisions based on these. In which areas is the University of Vienna exceptionally successful? To also determine this, the key research areas of the faculties arising in a broad bottom-up discussion process have been provided with specific output indicators. The key research areas of the faculties themselves are described in detail in the respective faculty chapters (see chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships). The relevant indicators include the acquisition of significant competitive third party-funded projects (e.g. EU, FWF, FFG, Vienna Science and Technology Fund WWTF), the awarding of renowned academic prizes (e.g. ERC grants, START or Wittgenstein Awards) and establishments of particular international visibility, such as the European Law Institute (ELI). In addition, key research areas of the faculties can also be identified by particularly good performance in current subject rankings such as the QS, THES or Shanghai Ranking or by the establishment of Christian Doppler Laboratories, COMET or Laura Bassi Centres. These key research areas of the faculties, which are particularly emphasised on account of objective information, have been grouped together in cross-faculty research specialisations of the whole University for reasons of

clarity and also on account of real connections in terms of content. These cross-faculty research specialisations (determined using the currently standard outcome indices) 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 (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 nine cross-faculty research specialisations. The order in which the cross-faculty research specialisations are listed in the *Development Plan* follows the principle of going from the theoretical to the concrete and, in turn, going from the smallest to the biggest scale level.

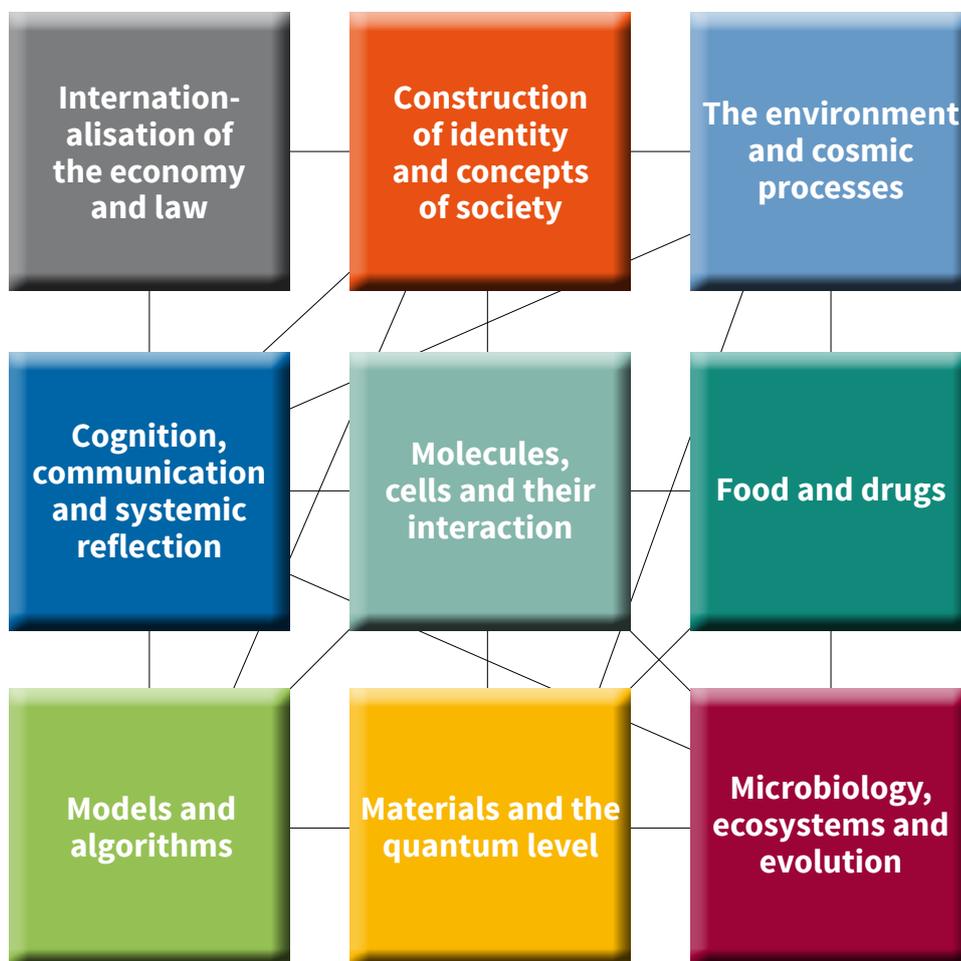


Diagram 11: Cross-faculty research specialisations of the University of Vienna.

- **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, Physics and Computer Science are involved in this cross-faculty research specialisation. Currently a total of four ERC grants, four FWF START Prizes, ten WWTF grants, four FWF thematic doctoral programmes, three FWF special research areas, one National Research Network of the FWF, four EU projects, two projects of the Innovative Medicines Initiative of the EU, one Berta Karlik professorship and one Simons Foundation professorship can be allocated to the cross-faculty research specialisation.
- **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 onto the examination and development of sustainable materials for environmentally friendly technologies. Four ERC grants, two FWF START Prizes, one FWF special re-
search area, one FWF thematic doctoral programme, 10 EU projects and two CD laboratories are behind this cross-faculty research specialisation.
- **Molecules, cells and their interaction:**
This cross-faculty research specialisation, in which the Centre for Molecular Biology/MFPL 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, four FWF START Prizes, four FWF thematic doctoral programmes, four FWF special research areas, one EU project, five WWTF projects, two Berta Karlik professorships, one Laura Bassi Centre and one CD laboratory enable and promote this cross-faculty research specialisation.
- **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 na-

ture. The Faculties of Chemistry and Life Sciences are involved here. Two ERC grants, one FWF thematic doctoral programme, one FWF special research area, three EU projects, four projects of the Innovative Medicines Initiative of the EU and one CD laboratory were acquired.

- Microbiology, ecosystems and evolution: This cross-faculty research specialisation, essentially supported by the Faculty of Life Sciences and the research network Chemistry meets Microbiology, concerns microbiological, evolutionary, developmental and ecological processes which are responsible for the current diversity of organisms in our world. This cross-faculty research specialisation, with a total of seven ERC grants, one Wittgenstein Award, one START Prize, four WWTF projects, one FWF thematic doctoral programme and two EU projects, is also very successful.
- Construction of identity and concepts of society: This humanities and social science cross-faculty research specialisation of the Faculty of Historical and Cultural Studies, the Faculty of Philological and Cultural Studies, and the Faculty of Social Sciences concerns questions of constructions of identity at the individual and collective level in the historical and current context and in a global comparison (including Byzantium, Europe, Southeast Asia, China). The cross-faculty research specialisation can be allocated four ERC awards, one Wittgenstein Award, one START Prize, one FWF special research area, three EU projects and three WWTF projects.
- 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 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. This cross-faculty research specialisation acquired three ERC awards, one FWF special research area, two FWF thematic doctoral programmes, six WWTF projects, one EU project, one ESFRI project and two Berta Karlik professorships.
- 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 ins-

tutions and the legal challenges and risks arising here. The cross-faculty research specialisation can be allocated four FWF thematic doctoral programmes, one CD laboratory and the European Law Institute (ELI).

- The environment and cosmic processes: This cross-faculty research specialisation combines the Faculty of Earth Sciences, Geography and Astronomy and the Faculty of Physics 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). Two ERC awards, one National Research Network of the FWF and four EU projects were acquired here.

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

In the coming years the University of Vienna wants to promote the research activities of its academic staff and, in particular, continue to improve framework conditions which are useful for project-oriented research. Its academics need to be given the best possible support for the acquisition of third-party funds to be even more competitive internationally. This goal is based on the empirical observation that third party-funded research has developed positively but, overall, can still be expanded. An international comparison of the acquisition of third-party funds (see chapter 2.3: Financial Starting Point of the University of Vienna) shows that the current share of third-party funds of 13.9 % needs to be clearly increased. This concerns the acquisition of national and international third-party funds, and here in particular those which are awarded in competitive procedures. Greater attention also needs to be paid to stimulating the acquisition of third party-funded projects that are not oriented towards basic research and are funded, in particular, by the FFG, the Christian Doppler Research Association and also directly by companies (see also chapter 3.4: Impact of

the University on Society – Exchange of Knowledge). As shown in chapter 2: Starting Point, there is still potential to increase the activities in this area. Success in the area of third-party funding is, in addition to the financial aspects, also connected with a particularly large boost to the reputation of the participating researchers and the University of Vienna, and the visibility of research at the University of Vienna is increased. Furthermore, competitive procedures based on appraisal by international subject experts, such as the ones used in particular in the programme lines of the FWF, the WWTF and the EU, are also an important quality assurance element.

To increase the third-party funding activities of its academics, the University of Vienna wants to continue to rely on the tried and trusted support structures, and here service orientation needs to be the priority when supervising and advising academics in the whole project cycle. Successful large-scale projects which, on account of their size and the number of partners, make a decisive contribution to increasing the visibility of the University of Vienna will continue to be funded with subsidies from the global budget (commitments). Here there is particular focus on the acquisition of EU projects. As part of Horizon 2020 and also in the subsequent 9th EU framework programme from 2020, the University of Vienna plans to continue the successful focuses established in the excellence and mobility programmes which are running in this area and also to maintain the high level of participation in cooperation projects. With the wide range of subjects represented, the University of Vienna already has a competitive edge over its competitors when it is a matter of meeting the requirements of the new programme in terms of high interdisciplinary willingness to cooperate. This potential also needs to be made increasingly visible internally. As well as the tried and trusted research platforms, the research network as an instrument also needs to be adapted in order to create critical mass at the University of Vienna, which should be the starting point for applications in specific calls for proposals as part of Horizon 2020 and in the 9th Framework Programme. In addition, measures are designed in order to increase the participation of academics from the social sciences and humanities in calls for proposals of the EU framework programmes. Also an ERC mentoring system is planned to be set up in which successful ERC grantees pass on their experiences from the application process to potential candidates.

Enabling measures to increase third party-funding activities also need to be designed for areas where the workload in teaching is particularly high, and also for female academics who, on account of the legally required share of women in boards, have a lot of work to do due to self-administration.

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 increasingly as the basis of strategic resource decisions in the future. 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 3.6: 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 young academics 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: Study and Teaching). By moving parts of the life sciences to the new 'Biology Centre' 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.

Continuing to venture into new territory

In addition to the expansion of existing strengths, the University of Vienna also wants

to set up new fields of development in research in a target-oriented manner and in line with its profile. 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 the neurosciences, the field of digital humanities and data science, in cooperation with the Medical University of Vienna microbiome research (see also chapter 3.3: International and National Cooperation) and, in view of the high significance of teacher education programmes at the University of Vienna, the strengthening of research on education with a focus on educational institutions. 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.

These 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 positions and with additional investments in academic and spatial

infrastructure (see chapter 3.6: 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. The planned future professorships of the FWF could also have particular significance for promoting innovative new areas, and here a mechanism to continue the professorships after the FWF funds run out, e.g. by filling tenure track positions, has to be developed.

Increasing the impact of research results

With the reflection on the impact of research, the University of Vienna accepts the challenge of policymakers to assess universities not only with regard to their research projects but also their effects on the economy and society. Even if academic impact is reflected in high-quality and much-cited publications, this should not be the only criterion when assessing impact. The developments in other European countries make it clear that this emphasis on societal impact will also continue to gain importance in future grant decisions, as also emphasised by the High-Level Report 'LAB-FAB-APP – Investing in the European Future we want' published by the European



Commission as a basis for preparing for the next Framework Programme. For the design of the upcoming Framework Programme, the High-Level Group of the Commission thus recommends also paying greater attention to the societal relevance of the expected research results, especially if it is a matter of answering significant global challenges and ensuring sustainable development (UN Societal Development Goals – SDG). Impact therefore needs to be reconsidered beyond the classic innovation cycle.

With the clear commitment to open science, the effect of the results of university research should be increased. 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 clearly increase the share of open access articles among the total number of journal articles (2015: 8.6 %).

The visibility and significance of the academic output of the University of Vienna also increase by improving the quality of the academic publications of 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 55.7 % (2015). 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.

Institutionally developing inter-faculty research

In addition to the indicated cross-faculty research specialisations, the various internal research organisation forms at the University of Vienna – research networks, research platforms and research centres – are seen as important instruments both for the development and also for the establishment of excellent research initiatives, which result from either bottom-up actions or, however, from institutional 'past histories'. They include forward-looking fields of research, contribute to profile development and illustrate the broad disciplinary orientation of the University of Vienna. Here there is firm integration of social sciences, humanities, business and economics and law research initiatives, and this can be seen at all levels of the internal research organisation (currently two research networks, nine research platforms and all three research centres). In addition, the STEM fields are also found in these internal research organisation forms. Innovative cooperation networks across the subjects and faculties therefore provide important pillars for forward-looking and profile-developing research at the University of Vienna reflecting all disciplines.

The internal support mechanisms need to be further developed on the basis of previous experiences. The instrument of research networks, which previously stood at the start of the internal support chain at the University, could also be thoroughly redesigned as an instrument of the University's third-party funding strategy here. Research networks, which have brought together researchers in particular in subject areas that are relevant for society, also need to be the starting point for third party-funded projects to a greater extent than they have so far. When they are set up, they remain easily accessible and are for a limited period and – in addition to the acquisition of third-party funds – the aim here is to establish a conceptional framework for a research question or there is the potential to develop interdisciplinary research beyond the boundaries of the faculties.

Research platforms have, essentially, proven themselves. They are set up by the Rectorate based on the results of regular, thematically open calls for proposals with international review in order to support promising new projects. In addition, when appropriate, research platforms can also be set up without a call for proposals in order to locate particularly interdisciplinary and current research activities at the University of Vienna. Research platforms are set up for a period of three years with the option of extending them for another three years. After conclusion of the start-up support by the Rectorate, successful research platforms can be transferred to research centres after another appraisal process.

Research centres must have an 'institutional past history' (e.g. as a research platform or FWF special research area), are initially set up for a limited period, and after successfully passing a first stage they are set up on a long-term basis but, at the most, for the duration of the employment relationship of their heads. Research centres are financed to a significant extent from third-party funds and faculty contributions and are subunits of an organisational unit which also has to participate in the funding. Based on experience, the participation activities of other faculties diminish with the organisational structuring as a subunit of a faculty. Tying the duration of a centre to the gainful employment of the head of the centre also has to be questioned, irrespective of the actual performance. In the area of research centres, conceptual evolutions are therefore required in order to firmly integrate successful, innovative and interdisciplinary research activities. The organisational structure of the University of Vienna should, with regard to the dynamics of developments in research, also be regularly changed at fairly lengthy intervals in order to enable new academic areas with high potential to be appropriately integrated institutionally.

Finally, the University of Vienna, together with the Medical University of Vienna, has set up research clusters which are now called inter-university cluster projects. These projects promote cooperation between the two universities and help to 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). They have proven successful and need to be expanded if possible.

3.1.2 Career Development of Young Academics

Every academic institution has to develop strategies and concepts in order to train and recruit the next academically educated generation for a professional activity inside and outside a university and therefore be able to ensure the reproduction and continued existence of the institution and establish international exchange relationships with other institutions. The more seriously this is done at the University of Vienna today, the more successful the University of Vienna will be in the future.

Status quo

Doctoral and postdoctoral candidates are a group of young 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 candidates need to develop their own academic profile in research and teaching and qualify for an academically-oriented career, see chapter 3.5: Employees.

A doctoral programme means 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 of advantage for their further professional career, either inside or outside universities.

With the three-year structured doctoral programmes introduced in 2009, the University of Vienna focused even more on educating young academics through intensive cooperation between doctoral candidates and supervisors in the doctoral projects.

In this process, the structure and the level of quality of cooperation and supervision of doctoral candidates and supervisors are raised jointly. There is emphasis on the role played by doctoral candidates in finding topics and, via a public presentation at the faculty, colleagues are integrated more extensively in the assessment of the topics (quality assurance). After approval of the topic, with the doctoral thesis agreement based on this, mutual commitment is ensured between the doctoral candidate and the supervisor and the supervision is determined. Together with the supervisors, work is done to ensure tailor-made teaching and courses to support the students and the details are set out in the doctoral thesis agreement. With arranged participation in national and international conferences and also with relevant publications of partial results, it is ensured that doctoral candidates are integrated in the specialist academic community. Quality assurance in doctoral programmes is ongoing and is ensured by measures such as the public presentation at the faculty and the progress reports on to the completion of the doctoral thesis with the public defence. Another element of quality assurance is the external review of the doctoral thesis. With the separation of supervision and review, the University of Vienna has also complied with international recommendations in the Statutes.

Via the uni:docs programme, for instance, the University of Vienna promotes an individual form of doctoral education. This is an initiative of the University of Vienna which aims to finance outstanding doctoral candidates for a period of three years to enable them to dedicate their time

fully to their doctoral project. The three-year positions for doctoral candidates awarded as part of the uni:docs programme are handed out on the basis of an evaluation procedure comprising several stages with external peer review of the applications and internal interviews with the applicants.

The University of Vienna also promotes the creation of groups of doctoral candidates who are focusing on similar subjects, including with the establishment of Vienna Doctoral Academies (VDA) and Vienna Doctoral Schools (VDS). The selection for the VDA and VDS is made by the Rectorate in a selection process comprising several stages on the recommendation of a selection jury consisting of international members. The goal of these two support measures is to bring together the most dedicated doctoral candidates and supervisors, to intensify supervision and cooperation and to enable disciplinary and interdisciplinary exchange. The VDA and VDS aim to help ensure that doctoral programmes are completed on time and with the right level of quality.

For collective doctoral education, the funding schemes of the FWF (e.g. thematic doctoral programmes, docfunds) and the EU (e.g. the Research Training Networks) are of great significance. The significance of collective doctoral education for determining academic focuses and for establishing networks between research areas can be seen, for instance, in the cross-faculty research specialisations (see above).

Further development of career development measures for young academics

Further improving the quality of doctoral programmes and further developing the introduced instruments to support doctoral and postdoctoral candidates will be a key task for everyone involved. See the personnel section of the *Development Plan* regarding the support of postdoctoral candidates (see chapter 3.5: Employees). Here there needs to be an increase in the share of active doctoral candidates with a completed public presentation at the faculty and also the number of doctoral candidates completing their studies on time. The 2017 amendment to the Universities Act enables the introduction of qualitative access regulations for doctoral programmes. The regulated access increases the mutual commitment of doctoral candidates and supervisors and therefore an increase in quality is expected in doctoral programmes. Within the framework of these legal possibilities, the University of Vienna will develop a quality-assured admission procedure for which an elaborated doctoral thesis topic and a confirmation of supervision need to be mandatory foundations. This should be made easier, and therefore ver-

tical mobility should be increased, by creating attractive doctoral programmes and carrying out targeted support measures for master's students to prepare them for the transition from a master's programme to a doctoral programme. With the other universities at the location, joint PhD programmes can be developed in similar subjects, e.g. the life sciences (see also chapter 3.3: International and National Cooperation).

In the long term, the development needs to go in the direction of a dual educational culture in which basic education as part of a bachelor's programme ('undergraduate') is extended by academic graduate education. Within the framework of the respective legal possibilities, new instruments could also be developed, 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: Study and Teaching). Such an extensive paradigm shift requires detailed discussions and can be seen in different subject cultures and from different perspectives.

In the current development planning period, the successful uni:docs programme is also being continued as a measure for supporting doctoral candidates. The Vienna Doctoral Academies (VDA) and Vienna Doctoral Schools (VDS) are being continued as support structures in the field of doctoral programmes, but are being further developed with the aim of harmonisation of the two models based on previous experiences and best practices. Possibly a standardised form of doctoral schools should emerge which are implemented on a more widespread basis than before at the University of Vienna in order to also enable a larger group of doctoral candidates and their supervisors to receive support. The future doctoral schools need to be clearly more extensive and larger than the previously established VDA and VDS and also need to include subject areas that have not been covered so far. In addition, together with the standardisation process, another organisational structural level needs to be incorporated in the doctoral schools in the form of several parallel, thematically focused programmes. Comparable with the classes at a school, in these programmes several persons authorised to supervise need to supervise their doctoral candidates in a clearly defined subject area. At the heart of every doctoral project is an individual supervision relationship.

The doctoral school itself remains a scheme with a wider range of subjects which is responsible for the organisation and administration of the activities within the school and can therefore act efficiently and in a way that saves costs. The number and subject orientation of the doctoral schools set up in this form need to be geared more than before towards the profile development of the University of Vienna in the area of



research. Despite the extension of the number of subjects and the widening of doctoral schools, quality criteria for the acceptance of doctoral candidates and their supervisors, should continue to remain at a high level, and here the accompanying quality assurance measures, such as joint interdisciplinary selection panels, have proven a success and should be continued in a correspondingly adapted form (see also chapter 3.7: Quality Assurance).

3.2 Study and Teaching

3.2.1 Studying at the University of Vienna

The University of Vienna currently offers 174 degree programmes, including 56 bachelor's programmes, two diploma programmes, 103 master's programmes, 13 doctoral programmes and also 39 university continuing education and training programmes (in the form of non-degree programmes). More than 10,000 graduates complete their studies every year at the University of Vienna and enter the European labour market and the European Education Area. With their research and teaching expertise, 6,800 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 (ECs). The University of Vienna offers around 120 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 without directly connected subject matter. 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.

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.

Experiencing the international community:

Students at the University of Vienna are part of a large and diverse community of around 94,000 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 gather international and intercultural experiences irrespective of their financial situation. This is also relevant with regard to later career prospects: A stay abroad improves the chances of finding a job later.

Promoting active, autonomous students:

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.

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.

Experiencing diversity:

The University of Vienna sees the social, cultural, linguistic, religious, 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 succeeding in their studies. 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. 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 courses, courses at off-peak times, e-learning).

The gender distribution in individual subjects varies greatly. Overall for the University of Vienna achieving a gender balance is an important goal, especially in STEM programmes. Gender-specific demand also reflects socially-related interests and expectations and cannot be changed by the University of Vienna alone. By training 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 are already countered at school with corresponding sensitivity and targeted support.

Taking advantage of the opportunities of digitisation for teaching:

The use of digital teaching/learning formats expands the spectrum for designing learning processes and enabling learning as an active occurrence for students. Teaching formats today are diverse. In addition to classic formats, other – in many cases digitally supported – courses are also increasingly used. The University of Vienna continues to focus on the expansion of open education resources for blended learning courses. In this way, students can develop topics and questions independently. In addition, communication both among students and also between students and teachers is intensified via digital instruments. Moreover, at the same time, ‘digitisation’ is being integrated in many courses as a research subject and as a social topic because this development will influence life and work increasingly in the next generation and competences for dealing with digitisation are essential.

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 is taught by research-based and method-oriented teaching. 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 students to use the introductory and orientation period to check 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. The financial and therefore also staff-related framework conditions often do not enable good student-teacher ratios until after students have started their degree programmes. In relation to the number of new entrants, the number of graduates is too low. The University of Vienna endeavours to continue to increase the number of graduates and, from the start, to help ensure there is higher probability of study success; this, however, would make it necessary to have legal foundations for further selection procedures in some areas. The University of Vienna gives its backing to the concepts developed by the Federal Ministry of Science, Research and Economy (BMWFV) for teaching capacity-based funding and basic funding of research, connected with widespread suitability checks (for the purpose of orientation) and – if necessary – selection processes, and here regional differences in student-teacher ratios will also have to be taken into consideration.

3.2.2 Studying Today

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

Today a wide range of people begin a degree programme. The number of people who do not take up studies directly after obtaining their secondary-school leaving certificate is rising. Related reasons are orientation periods, a job or stays abroad. In addition, there is also 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 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, 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

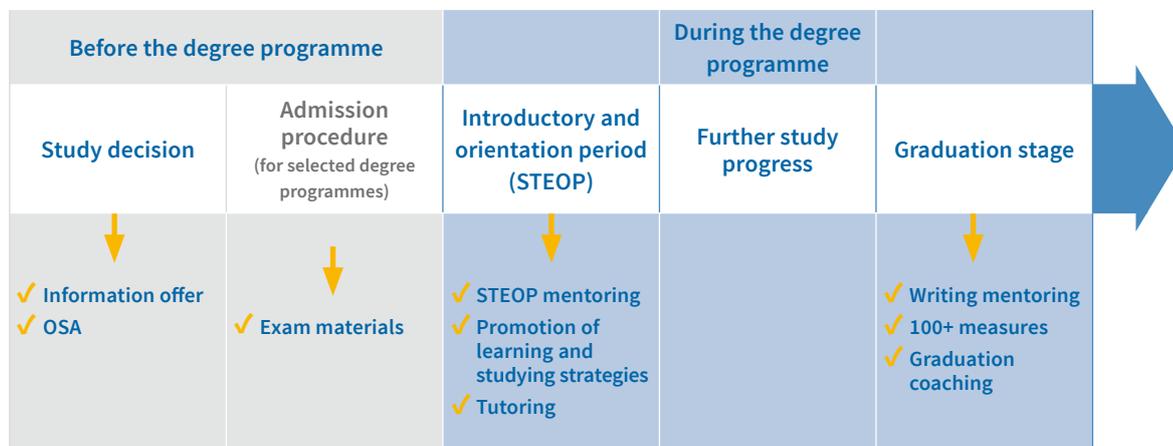


Diagram 12: Student lifecycle and support programmes offered by the University.

To provide orientation for prospective students, in many degree programmes an online self-assessment (OSA) is available which provides information on 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 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. In the coming years, the University of Vienna will endeavour to provide OSAs for all degree programmes with high numbers of new entrants and/or drop-outs.

In some degree programmes at the University of Vienna, admission 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, admission procedures are carried out if the number of prospective students exceeds the number of available study places. The task of admission 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 admission procedures should help to increase the rate of students who have taken a certain number of examinations and also the number of graduates. Findings as part of an extensive evaluation of the admis-

sion procedures and aptitude tests point in this direction: They do not only show that, since the introduction of the admission procedures and aptitude tests, the rate of students who take a certain number of examinations 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 admission 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). In sport science programmes, physical fitness and motor skills are tested.

The aim is to enable prospective students to better assess their own competences. The goal of the University of Vienna is to extend the aptitude tests as an aid for the orientation of prospective students, if the legal regulations allow this.

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 a subsequent master's programme. The system changes introduced with the Bologna framework, which were initiated at the start of

the 2000s, are therefore largely completed. Currently in the area of Law, as part of the Zukunft Hochschule (future of university) project with the participation of the University of Vienna, the degree programme is being further developed in the course of the nationwide debate with consideration of the advantages and disadvantages of a possible transition to the Bologna framework.

The 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 academic basic competence which aims to fundamentally determine how problems have to be handled and solved with an academic approach (with regard to the question and methodology).

STEOP: a bridge towards study

As the first stage of studies, the introductory and orientation period (STEOP) introduces the students to the University's teaching and learning culture. 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. As a curricular element, it makes a key contribution to quality assurance in study and teaching, builds a bridge towards study and therefore improves the starting options. In addition, it also makes planning easier for universities 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 and to enable students to change their degree programme at an early stage.

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.

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.

The University of Vienna expects its students, after they have completed the STEOP phase, to endeavour to graduate "in their main degree programme"; if interests are served by other degree programmes, this is a desirable additional effect and side effect for students.

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 build a bridge to a master's programme whose subject is not directly related, they can increase the options for vertical mobility and expand interdisciplinarity. For the future there is the intention to design extension curricula for current questions in order to be able to rapidly respond to challenges. In addition, extension curricula are also being integrated in those degree programmes 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 topics and implement innovative new formats.

Graduation as a goal

The University of Vienna endeavours to continue to provide supporting measures to bachelor's students who, after completing the introductory and orientation period, have 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/studies service centers/teachers to strengthen the bond and commitment and 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 (e.g. also with support 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.

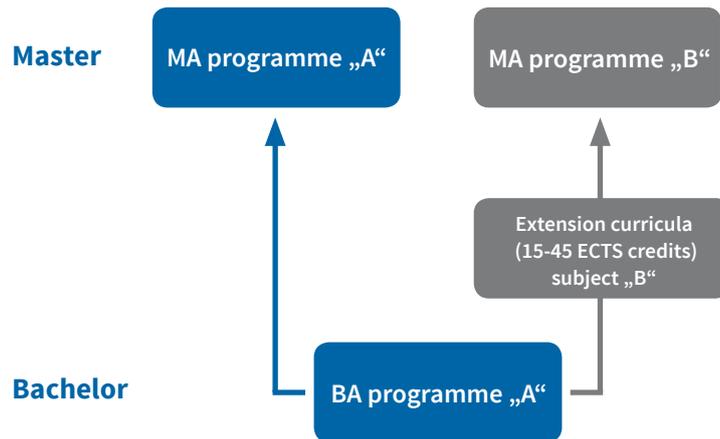
If students opt for a master's programme, they often ask themselves the question: Should I choose a master's programme in a connected subject? Should I change university? Should I begin an interdisciplinary master's programme with a new content focus? Is a non-consecutive master's programme in a new 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 becomes 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 on preliminary/subsequent programmes and requirements are shown. After displaying the connections within the University of Vienna, this information also needs to be prepared 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 13: Model for non-consecutive study options.

Master's programmes

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.

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.

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, this knowledge is extended 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.

From the master level onwards, 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 Young Academics).

A master's programme enables students to begin either

- relevant professional practice (Students can apply the obtained knowledge/skills in professional practice. The degree therefore provides training for a specific professional field.)

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 are of relevance for the future. 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.

or

- a predominantly academically oriented career.

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 pathway in the programme can be completed in a foreign language.

The selection of the corresponding form in a master's programme sets the course for a more practice-oriented or a more research-oriented career.

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.

3.2.3 Challenges/ Cross-Sectional Topics

The new teacher education and training scheme

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 2016/17. The new bachelor's and master's programme combines teacher education-related subject-specific academic, subject-specific 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 the hub between the cooperation partners in the Group and external institutions (such as the regional

education board, 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 young academics.

In the next few years, new cross-sectional topics will become the focus of interdisciplinary research, taking into account the rapid changes of our globalised knowledge and innovation society. Key topics will be:

- the changes in media technology and their implications for teaching and learning;
- education processes in the context of migration and globalisation;
- changed forms of organisation and structures of schools as a prerequisite for the teaching of tomorrow.

These cross-sectional topics will also be considered in the education of future teachers. The changes in media technology create new forms of knowledge acquisition at increasing pace which need to be questioned critically. The students should be aware of the opportunities due to technology and use the resulting new concepts of teaching and learning competently at school. The goal in this respect is to create optional elements as part of teacher education programmes enabling students to acquire digital skills and learn to critically reflect on the significance of accessible knowledge and of new media technologies for teaching and learning. Other parts of the curriculum are topics such as migration, inclusion and diversity in classrooms and schools facing new challenges. Therefore



future teachers are trained more than ever before to act as school developers who want to actively shape the school. Supported by mentors and experts in subject-specific 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-specific didactic approaches themselves, for instance.

As well as existing teacher education programmes, degree programmes are being developed, particularly extension studies for graduates of six-semester teacher education programmes at university colleges of teacher education, to ensure they have access to master's programmes in the alliance. Wherever necessary at schools, it is planned to set up 'one-subject teacher education programmes' in subjects which are in demand to enable graduates of selected studies to qualify for the teaching profession by acquiring qualifications in subject-specific didactics and gaining educational and practical experiences through teaching at school.

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-specific 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.

Focus on the digital challenge

Digitisation has not only reached the world of work but also the University of Vienna and its teaching practice.

Digital tools form a part of the everyday life of today's students. The University of Vienna is facing the challenge of coming up to the digital change in its teaching and carrying out continuous further developments of teaching by integrating digital elements.

- It is necessary to provide high-quality learning options with a useful mix of attendance and online learning for the students, who are characterised by increasing diversity (living conditions, origin, level of knowledge) and changed media and communication habits.
- In this way, the University of Vienna complies with the demand for learning irrespective of time and place and increasingly safeguards study feasibility and flexibility of learning programmes for its students.

- Teachers are called upon to adjust their teaching even more than before to the learning progress of their 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 interaction in attendance courses.
- In addition, there is the requirement of increasingly opening up teaching towards open educational resources, which make it possible to reuse the materials of colleagues from the same discipline in a legally unobjectionable manner as well as to enable the students to make up for knowledge gaps from before and during the studies.
- The University of Vienna is faced with the task of making university-wide support options available to teachers to enable them to further develop and enhance their teaching with digital elements. High-quality, digitally accompanied teaching offers can only be integrated on a broad basis if sufficient support is provided to the teachers.

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 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 (Third Mission, lifelong learning) and attract international students. Nevertheless the University acknowledges the importance of textbooks published by publishing houses.

Advanced 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.

Quality in teaching

Quality development in the area of studies and teaching is 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.

With the measures conducted as part of the quality audit (feedback policy, student surveys, 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. It is in the quality interest of the University of Vienna and of the students themselves that the students and graduates actually achieve the competences foreseen in the respective programme.

The development of curricula is among the major tasks of the University of Vienna. These 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 young academics and the requirements of the non-university labour market. The qualification profiles and learning outcomes must be transparent to prospective students, students and teachers. The regulations for teaching and examinations must be adjusted to the quality of the content of the degree programme, study feasibility, as well as stable conditions with regard to personnel and infrastructure. The curriculum development process was set up in cooperation with the Senate and the Curriculum Committee and has proved successful. Before curricula are completely formulated, their objectives and content focus as well as personnel-related and budgetary frameworks to guarantee appropriate student-teacher ratios and required capacities are specified. This is already done at an early stage and leads to joint written specifications by the Senate and Rectorate 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 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 compact course offer for young teachers (predocs) which supports them in their entry into the teaching profession, there are in-depth courses related to teaching competence. Teachers can also take advantage of one-on-one coaching and try out innovative teaching sequences with their students in the learning lab.

Performance appraisals aim to inform students about the state of the performance they have achieved and, upon graduation, 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 programme, the teachers are called upon to increasingly discuss subject-specific quality requirements, distinguish between the students' performances based on certain criteria and differentiate in their grading accordingly. Fair appraisals are accompanied by transparent objectives and assessment criteria 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 depending on the framework conditions and forms part of instructions for peer feedback.

Continuing education and training

The Postgraduate Center of the University of Vienna offers university continuing education and training programmes (CET) 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 ac-



ademics, programmes are conceived for specific occupational areas and offered on the continuing education and training market. 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.

Alumni/alumnae activities

The alumni/alumnae activities of the University of Vienna aim to maintain lively contact with all graduates of the University of Vienna.

The University of Vienna wants to be an educational partner for its alumni/alumnae beyond graduation (i.e. invite them to participate in the wealth of continuing education and training programmes, subject-related events, possibilities to establish networks and read publications) and, at the same time, make it possible for practical experience to 'flow back' to the University of Vienna (i.e. invite the graduates to contribute

their expertise at the University of Vienna, such as at events as mentors or in the development of new projects).

The Alumni Association is the official point of contact for graduates of the University of Vienna and is set up as a network. The activities of the Alumni Association are focused on three areas:

- Orientation and information: Current topics are presented at events (such as the Alumni Lounge) and in publications (such as the *univie* magazine) and analysed from the perspective of scholars and graduates of the University of Vienna respectively.
- Establishment of alumni/alumnae subject-related initiatives: To promote the formation of specialist networks and make it possible for graduates to take part in developments in their own specialist fields, the expansion of subject-related alumni/alumnae groups is being initiated and their establishment is actively supported with a range of services for those who are responsible for alumni/alumnae at the faculties.
- Creation of a network and attracting partners: The community of alumni/alumnae currently comprises some 70,000 graduates. The goal is to establish the network of alumni/alumnae as a possibility for graduates to become involved personally (e.g. as mentors for students in the final phase of their degree programme). In the foreground with the establishment of a community there is the invitation for alumni/alumnae to co-

operate actively. “Attracting partners” also comprises the expansion of the sponsoring activities for the Alumni Association.

Administration and organisation

In each academic year, more than 17,000 applicants are admitted to a degree programme and around 10,000 students complete their studies successfully. In around 17,000 courses a year, some 94,000 students and 6,800 teachers cooperate in currently 174 degree programmes, about 1 million examinations are taken each year. Several thousand master’s theses and doctoral theses in different stages of completion are being supervised at any given time. Given these numbers, 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.

u:find, Moodle and u:space are three of the IT systems which are integrated into everyday student and teaching life and are meant to make it possible for students and teachers to focus on the contents of the degree programmes and learning. Also in the next years, the University of Vienna will invest in the digitisation of the study, teaching and examination organisation in order to improve existing processes and create new services (see chapter 3.6: Infrastructure). As well as the continuous improvement of the admission to studies, the focus is also on the registration system for courses and examinations. It is also necessary to respond to networks between the degree programmes and educational institutions. Cooperation between universities and university colleges of teacher education requires networked solutions; the same applies to the increase in vertical mobility and to the competence-oriented recognition of examinations, which must not fail due to tight bureaucratic specifications or technical obstacles.

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 the goal of professionalisation, measures of organisational and human resources development will be taken in the service units and studies service centers in the next few years, aiming to further expand solution-oriented and autonomous action of individuals, teams and between the institutions (such as intensifying agile approaches in software development, see chapter 3.6: Infrastructure; team structures and continuing education and training in the studies service centers, see chapter 3.5: Employees).

3.3 International and National Cooperation Projects

Based on the tradition and self-conception of the University of Vienna, the objective arises of being an internationally visible university which can come out on top among the international competition for staff, students and research projects and is seen as an attractive partner in research and teaching cooperation projects (see chapters 3.1: Research and Career Development of Young Academics; 3.2: Study and Teaching; and 3.5: Employees).

Here the internationalisation of research and teaching forms a part of a comprehensively conceived quality strategy: teaching and research cooperation projects with the best suited partners in order to pool resources and keep up with the latest international research.

Cooperation projects are also important in the national and especially regional context because they contribute to enhanced use of infrastructures and exploitation of synergies in research and teaching.

3.3.1 Mobility Programmes and Internationalisation@home

Cooperation across institutional borders, exchanges of research approaches, methodological approaches and findings as well as the mobility of students, academics and university staff are key instruments for conducting teaching and research with a focus on quality.

The University of Vienna accounts for one quarter of all Austrian Erasmus mobility stays of students, more than one quarter 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 1,300 Erasmus agreements and around 100 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 360 EU partner universities and has concluded framework agreements with over 70 partner universities outside the EU.

The University maintains intensive research contacts with best-ranking international universities (see chapter 2.1: Research at the University of Vienna) and with many other international university 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 inside and outside the EU. In addition, the University accepts its responsibility and implements its own complementary programmes to enhance the mobility of students and teachers. The mobility of students should not be a question of social origin but should be an option for as many individuals as possible by providing public and university subsidies.

The existing system is well established, with improvements and new aspects planned to be implemented in the areas specified below in the next years. The goal is, in any case, to maintain the high share of students and graduates who have completed a part of their studies at a university abroad and, where possible, to increase this share further. Another goal is to expand the mobility of teachers and the mobility of the general staff, both of which are supported by Erasmus+.

Keep the Erasmus+ student mobility at a high level: In the field of outgoing mobility, the University of Vienna ranks high in the European university landscape and has taken major quality-assuring language preparation measures for outgoing students. The University has also established itself as a top institution in the incoming area. The University of Vienna attempts to maintain the high level of Erasmus mobility stays (incoming and outgoing) it has already reached and to expand its mobility stays in the fields of practical courses, teachers and administrative staff. For this it is necessary to enhance the existing information structures, give the students curricular mobility options (mobility windows, recognition options that are secured on a contractual basis: joint tracks) and further develop the portfolio of partnership agreements in a quality-oriented manner.

Gradually expand the Erasmus+ staff mobility: The University of Vienna strives to gradually expand this field and encourage the internationalisation of the teaching staff and also of the administrative staff. Here the Erasmus+ staff mobility with non-European partners constitutes an additional option to internationalise teaching staff and general staff and opens up strategically important, additional cooperation projects for the University of Vienna with selected partner universities.

Internationalisation@home: Joint classrooms at the University of Vienna and selected partner universities serve to foster the formation of networks and intensive exchanges of regular students with international students. Short-term mobility periods for selected students enable

an internationalisation of seminars at two universities in each case. In addition, certified univie: summer/winter schools offer international and Austrian students and young scholars the possibility to establish contacts and exchanges with experts from research and practice as well as students from the whole world. A prerequisite for the certification of a summer/winter school is its academic relevance and high academic importance.

In addition to the measures mentioned above, it is planned to continue implementing regular improvement measures in the field of administration (such as improvements in the field of administration software) to support the internationalisation activities of the University of Vienna.

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 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 international level. Initiatives for cooperation projects usually come from researchers and are pooled together and ensured by institutional measures. Five focuses are highlighted here:

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 goes beyond the Rectorate level and also covers the area of central services.

Expansion of non-EU mobility programmes: Like every globally acting university, the University of Vienna wants to intensify cooperation with third countries. The new Erasmus+ international mobility programme makes an important contribution in this respect and allows the expansion of student and teacher mobility at and from partner universities outside Europe. The established instrument of non-EU teaching mobility programmes will be maintained and, if the budget allows it, also expanded.

Expansion of strategic partnerships: Strategic partnerships will be further expanded. This means that university-wide cooperation projects

with leading research universities outside Europe are being intensified and, at the same time, the used funds are being concentrated. At present, the University is in a strategic partnership with the Hebrew University of Jerusalem and with the University of Chicago. Other strategic partnerships are planned with prestigious universities in the focus regions as specified in the internationalisation strategy. The goal is to set up three additional strategic partnerships in the coming years.

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 3.6: Infrastructure).

Membership in European university networks: The University of Vienna will further intensify its network affiliation in the European Research Area with its membership in university associations such as the European University Association (EUA), the Network of Universities from the Capitals of Europe (UNICA) and the newly founded Guild of European Research Intensive Universities ('the Guild') as well as the European University Foundation (EUF). As part of UNICA there is the possibility of strengthening experience exchange with Erasmus+ partners.

3.3.3 National Cooperation

Despite their good relations at the individual level, autonomous universities are in institutional competition with other universities and non-university research institutions. On account of scarce resources but also to enhance potential synergies, there is increasing need to enter into national cooperation ventures for strategic and financial reasons and lay them down at the institutional level. 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.

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 goal is to strengthen and deepen cooperation with the Medical University of Vienna, also by setting up joint structures to be competitive internationally. The tried-and-tested cooperation as part of the jointly run Max F. Perutz Laboratories is being continued. Max F. Perutz Laboratories 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. Here the joint use of the top-notch equipment infrastructure, also as part of the joint Vienna Life Science Instruments (VLSI) initiative and at the location Bohrgasse as part of an extended participation in VBCF GmbH, plays a special role. With the construction of the new 'Biology Centre', one of the most attractive research locations in the field of life sciences will be built in the vicinity of Bohrgasse/Schlachthausgasse (see chapter 3.6: Infrastructure).

Other institutionalised cooperation schemes include joint professorships, joint research projects (inter-university cluster projects) and joint curricula (see chapter 3.2: Study and Teaching). Joint professorships are foreseen, for instance, at the interfaces between mathematics, computer science and medicine (computational medicine) and at the interface between medicine and nutritional science (public health nutrition) (see chapter 4: Key Research Areas of the Faculties and Subject Dedication of Professorships). The inter-university cluster projects, which promote innovative, translational projects, form a major scientific bridge to the Medical University of Vienna.

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 combined effect of different classes of molecules, which has been analysed by the fields of proteomics, lipidomics and metabolomics, constitutes a major basis for the further development of diagnostic and therapeutic possibilities. With these methods it is possible to detect at an early stage, in particular, the development of chronic diseases, the costs of which will, in the future, account for a major part of the GDP, and to treat them in a more targeted manner, as has already been shown in cooperation projects related to first clinical studies. In this field, a large number of cooperation projects are already being implemented between the University of Vienna and the Medical University of Vienna, which will be expanded, intensified and combined in joint structures. The emerging infrastruc-

ture can be used for practically all research issues which are also specified below and can additionally be a subject of a joint PhD programme.

- Cooperation in the fields of cognitive science and neurosciences, which has been set up in recent years, will be developed to establish a joint neuroscientific cluster. In this internationally highly competitive field, the establishment of a competitive research-oriented and research-led doctoral and master's programme together with the Medical University can strengthen the location on a lasting basis. A joint bachelor's programme with the Medical University of Vienna in the field of neurosciences would ensure that there are a sufficient number of early-stage researchers for this field, which will be highly relevant in the future (see chapter 3.2: Study and Teaching).
- Another major field of importance for future cooperation projects with the Medical University of Vienna will be microbiome research (see chapter 3.1.1: Research), a currently rapidly developing field. The research location Vienna has excellent preconditions for holding an internationally leading position in this field. For this purpose, 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. The goal could be to jointly set up a microbiome centre as a research pool.

- 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 PhD programmes. These could lead to enhanced permeability and recognition of curriculum modules as well as joint degrees (see chapters 3.2: Study and Teaching, and 3.1.2: Career Development of Young Academics).
- The already long-established cooperation in the area of cancer research and cancer therapy 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. The two universities here focus in particular on translational research, with the focus of attention on the development of active agents and on toxicology.
- Continuation of the research platform Department for Ethics and Law in Medicine, which participates in the jointly run univer-



sity continuing education and training programme in patient safety and quality in the healthcare system (MSc.).

- Worth mentioning are, finally, well-proven cooperation projects in the field of cancer research and cancer therapy (joint participation at the Ludwig Boltzmann Institute Applied Diagnostics) and joint activities in the field of translational research with special focus on toxicology.

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:

- Joint establishment of the Erwin Schrödinger Center for Quantum Science and Technology (ESQ) to strengthen quantum physics at the research location Austria jointly with TU Wien, the University of Innsbruck and the ÖAW and continuation of the Vienna Center for Quantum Science and Technology (VSQ) jointly 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 field of high-performance computing (Vienna Scientific Cluster, VSC+) will continue to have special relevance as a starting point for cooperation projects (see chapter 3.6: Infrastructure).
- Continued joint participation with TU Wien and the Vienna Business Agency at 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. Related framework conditions should be discussed with the ÖAW in general and on a case-to-case basis. With the combination of university-based and non-university-based basic research there are

not only resource-oriented synergies but also further developments of contents. In addition there is the connection between research and teaching which is beneficial for both institutions.

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. In the coming years, the associated governance structure needs to be expanded and improved.
- 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 will be intensified. Consultation meetings are being held and a joint statement is being developed in this regard.
- 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 joint doctoral programmes, the career development of scientists who are particularly successful or will be recruited jointly, and infrastructure planning. Integration of the Research Center for Molecular Medicine (CeMM) into the University of Vienna and the Medical University of Vienna continues to be an objective.

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: Study and Teaching). All the students of the bachelor's and master's programme 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, 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, TU Wien and the Austrian central institution for meteorology and geodynamics (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 Ludwig Boltzmann Gesellschaft in the field of human rights and as a partner in the Institute 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).
- The University cooperates with the Austrian Research Institute for Artificial Intelligence (OFAI) especially in the fields of deep learning/machine learning, cognitive science and computational linguistics.
- Cooperation with universities of applied sciences at the location of Vienna will be continued, with attention paid to permeability towards doctoral programmes at the University and the goal of further developing

permeability. Transitions need to be defined based on exemplary master's programmes and the examinations to be taken at a later point in time need to be specified independent of individual cases.

- 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 neurosciences).

3.4 Impact of the University on Society – Exchange of Knowledge

Topics related to society repeatedly give rise to new tasks and issues for the University. A university needs to have a pool of knowledge and methodology at hand and also continue to develop this to be able to answer new questions. This is the objective which the University of Vienna, with its broad range of subjects, has set itself because this is also its social responsibility.

As part of its innovation strategy, the University of Vienna has started creating a climate in which knowledge exchange activities are seen as a part of the University's tasks. In this way, in addition to the academic foundations for successful innovation, the University of Vienna aims to position itself successfully in all sections of the innovation chain. Activities in the 650th anniversary year (2015) of the University of Vienna have contributed to moving the University of Vienna closer to society and the economy. In a consistent continuation of this initiative, after the anniversary year the University systematically surveyed which knowledge exchange activities existed (Third Mission project) and, on this basis, it is formulating a strategy for the coming years.

The University of Vienna also wants to introduce its university core competences from research and teaching directly into society and the economy by actively transferring knowledge, technologies and innovations. The goal is a mutual exchange process for problems and solutions which is for the benefit of all stakeholders. The resulting knowledge exchange is more than the one-sided transfer of knowledge and comprises cooperation with a large number of external partners in a wide network from society, politics and the economy. Due to cooperation and exchanges with external partners, the University obtains valuable new stimuli from practice for academic research and teaching, and feedback loops with society and the economy enhance the impact of research findings (see chapter 3.1.1: Research). For students and graduates, later career options could arise due to cooperation projects in which they collaborate or which are

dealt with in courses (see chapter 3.2: Study and Teaching). Moreover, additional interdisciplinary and intersectoral projects and strategic partnerships can develop from new contacts.

Thanks to cooperation schemes of the University with external partners, existing linear models of an innovation chain are terminated and merged in an innovation cycle. The resulting knowledge exchange is seen by the University of Vienna as an extension of the impact dimensions of its two core competences research and teaching and is perceived as one of its main missions.

Compliance with the principles of good academic practice needs to be observed in cooperation projects with external partners, like in the field of basic research. Academic findings can neither be prescribed nor ordered.

3.4.1 Knowledge Transfer, Social Commitment, Technology and Innovation Transfer

Research and teaching of the University are a source of innovations which contribute to finding sustainable solutions for the challenges of our time and providing stimuli for socio-cultural and economic developments in the region and beyond. The concept of knowledge exchange summarises all measures and activities which aim to establish networks between the University as such and society at various levels, to make an active impact on it and, based on academic findings, co-design social and economic developments, such as when the University deals with issues from practice.

Aiming to make the impact of the University in the field of knowledge exchange visible, the Third Mission project, which was launched in 2016, developed three dimensions to systematise the different activities. In terms of content, this structuring leaves much leeway to do justice both to the diversity of subjects of the University and to the diversity and complexity of social and economic demands. Moreover, these three dimensions are not exclusive, an activity can also be assignable to two or even three dimensions if necessary:

Knowledge transfer: This field comprises the well-aimed preparation for and appropriate teaching of the University's knowledge to non-university target groups as well as the systematic introduction of the University's knowledge into public discourse.

Social and societal commitment: The University understands this area as the well-aimed use of the University's knowledge to tackle the manifold social and societal challenges. This includes projects where the University's knowledge is applied and generated for society, particularly

by means of its commitment to civil society.
Technology and innovation transfer: The transfer of knowledge (know-how), ideas, technologies, innovations and patents from the University to economic contexts is decisive for innovation capacity. Also here a great number of successful examples can be named in connection with the University of Vienna.

The main foundation for the University's knowledge exchange projects is its own research. In addition, three additional criteria need to be fulfilled:

- Socially and/or economically relevant: The activity supplements the University's task in research and teaching and addresses social/economic topics/issues.
- Formation of networks with society and the economy: External cooperation partners are involved.
- Future-oriented and sustainable: The activity has a long-term perspective and impact; measures aiming at quality assurance are taken.

3.4.2 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 of Vienna wants to play an active role in all stages of academic questions – from the idea on to project implementation and 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:

Promote an open climate for knowledge exchange

The University of Vienna wants to be perceived as an open, reliable partner in the field of knowledge exchange. Stimuli and suggestions for academic questions from the economy and society will be taken into account appropriately in order to create an innovation cycle. The goal is to enhance understanding of university-based research by informing the public more actively about current topics, the creative research process and its outcomes.

Greater commitment with regard to knowledge exchange requires corresponding appreciation, both inside and outside the University. To support a culture of openness, the University of Vienna strives to develop, as far as this is possible, quality and recognition indicators for the three dimensions of knowledge transfer and increasingly initiate projects which facilitate active analysis and interaction between the University

and society. Among other plans, participation in EU projects that aim to cover the entire innovation cycle will be intensified. Another goal is that, for this purpose, activities that aim to enhance the transparency of research (open science/open innovation), improve the availability of knowledge (open access) and formats for the participation of civil society in university-based research and teaching (such as involvement of citizens, e.g. with methods of citizen science, in research, as well as of external cooperation partners in teaching, e.g. through service learning projects) will also increasingly play a role here (see chapters 3.1.1: Research and 3.2: Study and Teaching). Accompanying event and communication formats, such as those which create space for letting outside feedback flow back to the University of Vienna in a channelled way, ensure that the taken measures enjoy the required visibility. Training activities, also in cooperation with external partners, aim to provide academics – from the beginning of their academic career onwards – with the possibility to acquire and deepen relevant competences. Also new formats to develop the qualifications of students and graduates in the field of entrepreneurship will be developed (see chapter 3.2.1: Studying at the University of Vienna).

Expand and deepen the network of external partners

Functioning knowledge exchange requires 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 all fields of the public sector at the regional, national and international level. The University of Vienna also sees a strong alumni/alumnae network as an important component in the medium term in order to implement projects with third parties and also find new sources of funding. Students who have, at the University, already experienced the added value which is created through cooperation between the University on the one hand and the economy and society on the other can, as alumni/alumnae, encourage cooperation schemes with their alma mater with much conviction at a later point in time.

The establishment of long-term strategic cooperation schemes, such as joint projects with relevance for research and/or teaching, framework agreements, CD labs, the Ludwig Boltzmann Institute or participation in initiatives such as Steinbeis or knowledge transfer centres (wings4innovation), and also partnerships with companies, is the goal of these measures. In addition, the University of Vienna wants to increasingly focus on synergies with external partners in the creation, further development and commercialisation of intellectual property (IP). Academ-

ics are provided with support and advice by the University's Technology Transfer Office (TTO), in the case of spin-offs of companies by INiTS, the University's business incubator (see chapter 3.3.3: National Cooperation). The exploitation of IP and also of the specialist expertise of its academics should be based on in-house guidelines of the University.

Contribute to answering societal issues

With its academic expertise, the University of Vienna wants to contribute to solving the major social challenges of our time, such as those in EU framework programmes (especially the Grand Challenges Europe) or the UN Sustainable Development Goals (SDG). The goal is to pass on results from university research increasingly to society and the economy and (further) develop them in joint projects (see also chapter 3.1.1: Research). The University wants to encourage academics and students to take part in knowledge exchange with society and the economy, also in the field of cooperative and contract research (from NGOs to the economy).

In the study stage, the University already wants to enhance the social and practical relevance and become involved in initiatives which provide education via a thought-out link of academic knowledge with practical commitment (service learning). In university teaching it is the goal, wherever this is appropriate in terms of topics and methods, to connect academic learning with social commitment (see chapter 3.2.1: Studying at the University of Vienna).

Make a contribution to the competitiveness of the location

Committed and entrepreneurial action of the university members is a prerequisite for making academic findings and research results increasingly available to the economy and society for utilisation. The University wants to advise academics in a targeted manner in the development of cooperation projects with non-academic partners.

Even though service inventions, patents and licenses or spin-offs based on the University's know-how are not an end in themselves, they are truly indicators of the active role played by the University of Vienna in the innovation process and of the practical, active exchange of knowledge. They deserve credit for this and for producing the underlying results. The University wants to increasingly make use of synergies and cooperation projects with external partners in the creation, further development and commercialisation of IP.



3.4.3 Academic Communication

Active knowledge exchange between the University, the economy and society, accompanied by measures of academic communication, represents the best prerequisite for fundamentally improving the public perception of universities and academic knowledge. The joint objective of the measures to be taken is to communicate in an even better way the significance of academic knowledge and research for solving upcoming societal and economic issues.

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. The University of Vienna understands the task of academic communication as a combination of measures aiming at the public awareness of science as well as the public understanding of science and public engagement. Academic communication aims to awaken interest, explain academic knowledge and make it understandable. Thanks to extended cooperation between academics and social and economic stakeholders, it is also possible to achieve enhanced understanding of academic approaches.

This, in turn, strengthens the willingness of social stakeholders to work on questions in cooperation with the University and implement joint projects. The University therefore aims to further

intensify the dialogue between the academic world and society and develop additional, target group-specific information, communication and participation measures in the coming years. Entirely new opportunities arise due to novel, participatory models such as open science and citizen science. These opportunities 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. Academic communication at the University of Vienna starts with primary school pupils. The format termed Children's University of Vienna is well established and well known.

Academic communication is successful if there is serious and transparent dialogue. The formats need to cover the range of subjects in a synopsis. Moreover, the right mix of digital and analogue communication is decisive. But academic communication also needs places where regular and institutionalised contacts between the academic world and the public can be established.

The content-related ideas of academics are the basis of this communication. Also academic communication itself needs to remain innovative and continually develop new attractive formats.

3.5 Employees

Joint realisation of living academia

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 general 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 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.

Management: the task of the managers at all levels

The managers at each level have the special task of formulating expectations for work performance, if necessary in regular dialogue with the staff members, and giving them appreciative, open and motivating feedback at continual intervals with the objective of personal and institutional further development. The managers at all levels support the staff members in their competence development, and the University of Vienna invests in the development of management competence.

3.5.1 The University of Vienna as an Employer

The University of Vienna is a place of lifelong learning also for its staff. The workplace of the University of Vienna boasts high quality at all career levels: The University of Vienna offers its staff a wide range of services in a demanding work environment, including – in addition to direct continuing education and training in the immediate field of work – also a broad spectrum of human resources development, varied academic suggestions such as by holding events on topical research issues in many areas as well as cultural suggestions such as the possibility of performing in the Philharmonic Orchestra of the University of Vienna, reduced prices for language courses at the Language Centre of the University of Vienna or the occupational health promotion scheme, also with reduced prices for many staff members for participation in courses of the University Sport Institute.

Human resources development

Human resources development comprises measures to raise the staff's potential and enhance their qualifications. Due to the continually changing tasks in jobs, work organisation and work equipment, this requires a continuous further development process for the staff's skills and knowledge. The target group-oriented and topic-specific seminar programme of university-based human resources development with around 500 events and the use of subject-specific external continuing education and training programmes (with, annually, a joint reach of around 3,500 employees) makes a significant contribution in this respect.

Human resources development is a joint process of the office holders, their respective superiors and, of course, the individual staff members in particular. The objective of the measures is not only professionalisation for fulfilling their current tasks but also their further development to be able to carry out changing, future tasks as well as possible. The offer comprises, for instance, support programmes for young scholars, continuing education and training programmes in the field of teaching and higher education didactics as well as in the fields of diversity, skills for managers, competences related to IT and the further development of language competences. The staff members and managers at all levels of the University of Vienna actively contribute to the continuous improvement of the programme portfolio on offer.

Diversity, equal opportunities and gender equality, reconcilability

Students and staff of the University of Vienna form a community of people with different characteristics such as age and gender, social and geographical origin, internationality and people with disabilities. They are characterised by different life situations, experiences, views and competences. The University of Vienna sees this diversity as an asset. The University respects and supports transgender and intersex people within the scope of its possibilities. University members treat one another with mutual respect and understanding for each other's differences. They avoid any behaviour which runs counter to this principle. Appreciation of diversity is a task which the University of Vienna accepts as a matter of course; for support in this matter it has drawn up a diversity manual for teachers, for example.

As dimensions of diversity, the University of Vienna currently attaches particular importance to gender equality and migration background.

At the University of Vienna, gender equality is not merely a statutory obligation but also a key component of the profile of the University's culture. For the University of Vienna, the promotion of gender equality between women and men is therefore a key concern. Other objectives continue to be a balanced ratio between women and men at all levels as well as equal starting conditions and access opportunities for women and men. The objective of gender equality is integrated in all of the University's activities and enshrined as a universal guiding principle.

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. As a specific measure, the Berta Karlik Programme was launched in 2011 and newly designed in 2016/2017. With the new programme, the University of Vienna focuses on one of the main qualification levels of academic careers and offers temporary qualification posts in the advanced postdoctoral stage for outstanding female academics. Another specific contribution made by the University of Vienna is the Back-to-Research Grant, which is advertised by the University of Vienna at regular intervals. In addition, the University of Vienna organises career promotion programmes for young scholars at regular intervals (such as the *muv* mentoring programme) and continually refines these programmes on the basis of in-house and external evaluations.

Creating appropriate framework conditions so that professional careers or studies can be reconciled well with family-related tasks is an objective from which women and men can and should benefit equally. Therefore – to the extent that this is feasible in terms of the tasks to be fulfilled and in view of the size of the University of Vienna (because human resources policy measures always need to be checked carefully regarding their financial impact due to the number of potentially affected people) – the University of Vienna offers its employees leeway in how they work while taking individual living conditions into account (examples: flexitime, the possibility of temporary reductions of working time to a level below the legally stipulated minimum). 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 at the location of Vienna, not least through its employees.

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 are of major importance especially in this respect. 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 takes into account whether candidates already have a good record in teaching or it examines teaching concepts (see chapter 3.7: 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 is basically internationally oriented. 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/training of students at all stages of their studies and qualification of young scholars. 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 young academics. Most professorships at the University of Vienna are filled on a permanent basis following a competitive appointment procedure with an active search for candidates. 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 99 para. 4 of the Universities Act and also those based on section 98 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 these professorships 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 section 98 of the Universities Act), the recruitment for tenure track positions is increasing considerably at the international level, particularly in the natural and life sciences and in business and economics. The University of Vienna wants to increasingly focus on this instrument and make 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 positions 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: Two years after entry into service in an appropriately advertised post at the latest, the University of Vienna offers to conclude a qualification agreement if it becomes apparent that the expectations that are decisive for recruitment will be fulfilled; this monitoring phase is important due to the usually lower 'academic age' at the time of recruitment compared to appointments based on section 98 of the Universities Act. This phase can also be shortened or waived if there is a sufficient basis for assessment due to the performance in a postdoctoral period with a typical duration of at least two years. 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 another four years, leads to a permanent

contract as an associated professor. Associated professors have to fulfil similar tasks as university professors, especially also in the supervision of academic theses independent of whether a habilitation is granted or not.

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

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, in this way, make a key contribution to the supervision and training of students, the qualification of young academics and the acquisition of third-party funds. An appropriately equipped environment is needed for the fulfilment of these tasks. Associate professors who, also in the future, show high potential for outstanding achievements based on their outstanding achievements in previous years can be appointed as university professors by way of an appointment procedure based on section 99 para. 4 of the Universities Act. Also in such an appointment procedure the focus should be on the further infrastructural work equipment, subject to availability of funds.

Postdocs

At the University of Vienna, postdocs 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, postdocs 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 post-

docs – 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.

For Berta Karlik support measures cf. chapter 3.5.1: The University of Vienna as an Employer.

Predocs

The objective of a predoc 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/academically oriented form of employment in the economy or with other non-university employers. Predoc 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, predocs submit a letter of motivation with an outline of their ideas for an intended doctoral project. The University of Vienna expects holders of predoc 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 completing 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 equipment and other resources, 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, if necessary, to safeguard the study quality despite a lack of in-house resources. In the long term, however, external teaching staff will again only be used as originally intended. On certain conditions it is also possible to advertise lectureships for indefinite periods. 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: above all 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.

General 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 of its general staff, who support it and, with their competences, make a major contribution both to the provision of services and to the institutional further development. 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. The goal of the general university staff is to support the teaching and acquisition of academic knowledge in the best possible way. This requires the continual further development of competences and skills, building on expertise, foresight and understanding of the system. The efficiency and performance of the general 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 general university staff.

Like in the academic sphere, excellent qualifications and a wide experience background are important for the general 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 general university staff and their superiors steadily further develop the quality of the services, busi-

ness 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 digitisation of the business processes, including an examination of central and decentralised tasks. In the coming years, human resources business processes will be such a focus (see chapter 3.6: Infrastructure). As another focus in the coming years, cooperation in the administration of studies, teaching and examinations between the different units and levels will be strengthened, also with support by measures of organisational and human resources development (see also chapter 3.2: Study and Teaching).

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 general 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, suitable for different generations and sustainable in the long term and, in this way, also offers future generations of the academic university staff a fair chance of being employed and qualified.

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 (such as not filling professorships, transforming professorships to tenure track positions and/or other academic positions, creating professorships from other academic positions, rededications/shifts in focus). In addition, with a view to the expected significant increase in budget and subject to availability of funds, a number of professorships have been included in this *Development Plan* which are 'lateral' to established subjects or build bridges between subjects (deliberately also to overcome the perceived boundaries between faculties) 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, subject to a legal basis a maximum number of ten posts until 30 September 2023 is laid down for university professors (cf. section 98 of the Universities Act) 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 (based on the model according to section 99 para. 1 of the Universities Act), also without previous inclusion of a relevant subject dedication in the *Development Plan*. The creation of this possibility, which exists at many top international universities, has been explicitly advised by the Scientific Advisory Board of the University of Vienna to the Federal Ministry of Science, Research and Economy.

The goal is to create tenure track positions where existing staff positions become vacant, particularly in organisational units (faculties and centres) which reveal particular research potential. Tenure track positions will be filled gradually to avoid a cohort effect, which has the result that the majority of tenure track positions of an organisational unit are filled over several

decades. 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 produces 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). 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 70 subject dedications for professorships in this *Development Plan*, subject to availability of funds. The University of Vienna strives to make funding of these professorships possible. In particular, the University of Vienna pursues the objective, subject to the political implementation of capacity-oriented university funding, of raising the number of university professors (according to sections 98 and 99 of the Universities Act, provided they are appointed for at least three years) from around 400 at the beginning of 2017 to between around 530 and 550 by 2021, and subsequently raising it further by 2024 to between around 550 and 570 (or between around 600 and 640 if those people are added who only count as professors for organisational purposes but not in terms of labour law pursuant to section 99 para. 6 of the Universities Act). 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 goal is to achieve the desired increase by 2021 basically by implementing the following measures:

- Advertising and filling of the around 70 professorships as dedicated in this *Development Plan*, subject to availability of funds;
- Filling of the total number of up to 20 professorships as advertised at the end of 2016 based on section 99 para. 4 of the Universities Act for associated professors;



- Advertising (roughly in the year 2020) and filling of up to 20 further professorships based on section 99 para. 4 of the Universities Act for associated professors (see below);
- Advertising and filling of up to 30 professorships based on section 99 para. 4 of the Universities Act for associate 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.
- The goal is to achieve the desired increase by 2024 basically by implementing the following measures:
- Subject to rolling development planning to be carried out in 2020: 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 2023) of an approximate total of 20;
- 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 50 to 70.

In late 2016 the University of Vienna already advertised up to 20 professorships based on section 99 para. 4 of the Universities Act for associated professors and filled them in 2017. For another advertisement of posts, which is sched-

uled for approximately 2020, 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.

For associate professors, in 2011 there was advertisement of professorships based on section 99 para. 3 of the Universities Act, which is comparable to section 99 para. 4 of the Universities Act. Since 2011 as many as 32 associate professors have been appointed as university professors at the University of Vienna based on section 99 para. 3 of the Universities Act. The number of posts for associate professors who can be appointed as university professors in a simplified procedure based on section 99 para. 4 of the Universities Act is currently set at up to 30. The posts are advertised by the Rectorate (section 107 para. 1 of the Universities Act), the competitive appointment procedure is described in the Statutes.

Tenure track

The University of Vienna, subject to the political implementation of capacity-oriented university funding, strives to raise the number of filled tenure track positions ("positions which can be taken into consideration for a qualification agreement within the meaning of section 27

para. 1 of the collective agreement in the version applicable on 1 October 2015 and concluded according to section 108 para. 3 of the Universities Act”) from around 80 at the beginning of the year 2017 to between around 200 and 220 by the year 2021 and then to between around 300 and 320 by 2024.

3.6 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 in particular is to take the necessary precautions in good time so that research, teaching and studies at the University of Vienna can also be at an internationally competitive level in the future.

Major infrastructure projects from the previous development planning period have meanwhile been implemented. This mainly applies to the new ‘Biology Centre’ of the University of Vienna – a project of highest priority. It is being built by Bundesimmobiliengesellschaft (the federal real estate corporation or BIG) in the third district of Vienna and is planned to be fully up and running as of the winter semester of 2021/22. In the next years, other important steps will be taken regarding the location concept.

Moreover, the implementation of capacity-oriented university funding and the increase of funds provided by the Austrian Science Fund (FWF) will lead to the need for considerable additional space (offices, laboratories, course rooms). For this purpose, additional funds are required, which would have to be financed 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 2019-2021.

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 include both regular reinvestments in the field of high-performance computing and in the basic IT infrastructure. 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 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 objectives of the location concept, the support of the Ministry

of Education, Science and Research (BMBWF) is needed. The location concept also forms the basis for notifications by the University of Vienna according to the infrastructure roadmap (section 118 of the 2002 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 'Biology Centre' at Schlachthausgasse 43 in Vienna's 3rd district;
- continuation of fire safety measures in the Main Building (fiscal stimulus package);
- structural arrangements for implementing the House of Religions at Schenkenstrasse 8 10;
- increasing the number of usable rooms in the existing building at Währinger Strasse 38-42 to cover space required for the Faculties of Chemistry and Physics.

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. A notification for the joint library depository of the Vienna universities has also been made.

In the Main Building of the University of Vienna, additional measures related to the sustainable restoration of the fire safety infrastructure also need to be taken in the future; for instance, a lasting solution for the evacuation situation 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.

Temporary as well as permanent highly equipped alternative laboratory 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 for the STEM subjects.

Due to rapidly changing framework conditions (such as the introduction of the new university funding scheme), 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 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 of 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.

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 construction projects, especially new building projects (such as the new 'Biology Centre'), 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 will provide 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.

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 digitisation of spatial management. The Conference and Event Management service unit helps ensure appropriate utilisation by using and allocating course rooms during semester breaks and holidays.

Construction project management will be further developed with a focus on further standardising the processes. Here, one main emphasis in the further development over the next years 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 in research (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 'Biology Centre' 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 jointly 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 (CE-CAM) and in ESFRI/ERIC research infrastructures.

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 scientific 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 support 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. As well as required reinvestments in the basic IT infrastructure, the area of IT security continues to be a particular focus.

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 projects such as u:space (see chapter 3.2: Study and Teaching) and HR IT (see below). Where this is possible, these further developments are implemented using agile software development. This switch to agile methods and the associated closer feedback to the client leads to an improvement of the quality and orientation



towards the objectives of the created software and offers the possibility to respond quickly to changes in framework conditions and/or to use synergies.

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, 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. 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 work on u:space (IT-assisted applications, teacher interface, registration system, e-curriculum, Mobility Online, etc.). This area also supports 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 HR-IT project. This project comprises the acquisition and implementation of a modern, efficient system which provides IT-based support for all 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 of-

fered 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 of today – 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 University Library services.

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, 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) 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 further development 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 about services 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 pupils.

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.

3.7 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 Young Academics), personnel-related decisions, particularly appointment procedures and the tenure track process (see chapter 3.5: Employees), curriculum development and teaching processes (see chapter 3.2: Teaching), and the continuous improvement of service quality (see chapter 3.6: 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 in the hands of competent people allows observance of discipline-related and subject-specific requirements. Accordingly, quality assurance procedures and instruments are designed in a way that the specific preconditions 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 will also continue cooperating with the Austrian Agency for Research Integrity.

Further development of quality assurance measures/quality audit

One central goal of the University of Vienna is the continuous further development of its quality assurance system and of the established quality assurance instruments themselves. This is mainly achieved on the basis of the results of the quality audit conducted in 2014/15. 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 Hochschul-Qualitätssicherungsgesetz (Austrian Act on Quality Assurance in Higher Education, HS-QSG). Certification was implemented on the condition that a process for identifying examination forms be developed, which has meanwhile been done. 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: Study and Teaching). The University of Vienna will also continuously further develop its quality assurance system (processes and instruments) in the future. In this connection, the results of this and also future quality audits, international developments in the field of quality assurance, as well as recommendations of the Scientific Advisory Board of the University of Vienna will be considered.

Comprehensive evaluation of organisational units

In recent years, extensive experience has been gathered with evaluations, which has led to the further development of the process, and in particular to the improvement of the ratio between expenses and income. This development will be continued. All organisational units (faculties/centres and service units) are evaluated at regular intervals, currently 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. Also as part of a comprehensive approach of evaluation, occasion-based focuses can be set without losing sight of the overall picture: It will continue to be possible to focus on specific themes/issues which are determined together in advance by the Rectorate and the head(s) of the unit which is being 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 individual evaluation procedures

The performance of a university builds especially on motivated and qualified academic staff at all levels. Tenure track positions and 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).

Quality assurance in study and teaching

Quality assurance in study and teaching is implemented through a bundle of measures such as regular evaluations of courses, graduation surveys and graduate tracking. Specific surveys on individual services support the further development of the available degree programmes and the curricula, the improvement of the available courses taught and individual courses as well as the organisation of teaching. The time period stretches from the beginning of study in the introductory and orientation period, on to graduation and postgraduate training, with the findings also integrated into the further development of the studies. Special attention continues to be paid to the development of joint processes in the field of teacher education and to the further development of quality assurance in the field of teaching (such as evaluations of courses, examination standards) (see chapter 3.2: Study and Teaching).

Quality assurance in research and in the promotion of young academics

Quality assurance in research extends beyond the 'comprehensive evaluation', which also supplies valuable input from the outside whenever the key research areas of the respective faculties and cross-faculty research specialisations are developed. Quality assurance measures are applied in most cases by taking external reviews into account, such as in the establishment of research networks, research platforms, research centres and inter-university cluster projects. In the coming years, the question of how impact is defined will also have to be discussed again with a view to social impact (see chapter 3.1.1: Research). As part of this discussion and in connection with measures and formats which have to be newly conceived in this context and aim to contribute to enhancing the impact and increasing the visibility of research findings (such as in the fields of open science and open innovation), new, accompanying quality assurance measures are also developed. Quality assurance in doctoral programmes is ongoing and is ensured by measures such as the public presentation at the faculty and the progress reports on to the completion of the doctoral thesis, typically with external reviews and the public defence. In addition, quality assurance measures are applied and, if necessary, further developed when allocating individual support for doctoral candidates (uni:docs) and establishing Vienna Doctoral Academies/Vienna Doctoral Schools (VDA/VDS) (see chapter 3.1.2: Career Development of Young Academics).





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

4.1 Faculty of Catholic Theology

4.1.1 Objectives

The pluralistic society of the present day is characterised by a diversity of religious orientations and world-views. The pressing question we thus face is what religion, and particularly the Christian faith, can contribute towards solving the questions and problems that arise in the present society and culture.

In its research and teaching, the Faculty of Catholic Theology studies this question, on the one hand by examining Christian approaches to meaning and testing their plausibility in a critical dialogue. On this basis, it develops perspectives for social cohesion in society, and for shaping the future.

On the other hand, it researches the Christian heritage from a theological view, as well as the background for understanding key European concepts and ideas, whose origin cannot be grasped fully without Christianity and other religious traditions. It thus contributes to the hermeneutic examination of religious motifs in source texts of historical disciplines and of the humanities. It also prepares the academic basis for a variety of non-university areas of religious education, such as subject didactics and school development, adult education and church-affiliated pastoral work.

In addition, the researchers of the Faculty cooperate with other disciplines to study the role of religion in global processes of societal change.

Based on an interdisciplinary structure, which is a constitutive element of Christian theologies, the Faculty endeavours to pool the expertise of different academic disciplines engaged in religious research at the University of Vienna. The goal of these endeavours is to sustainably intensify this cooperation through the co-location of institutions involved in religious research and the contribution of expertise in the area of sociology of religion. In this way, synergies can develop, and the religious research at the University of Vienna can be made more visible at the international level.

For an academic examination of Christian approaches to meaning, the Faculty of Catholic Theology, as a first step, studies the philosophical perspectives of the question of God and human self-understanding. By elaborating the concept of human dignity it lays down the fundamental principles for human orientation in the ethical and cultural challenges of our time and in the future. It investigates ethical questions particularly with regard to the family, bioethics, medical ethics and intercultural issues. In view of the experience of migration and political developments, it aims to contribute solutions from a perspective of Christian philosophy and theology, with regard to coexistence on a basis of peace and justice, human rights, democracy and freedom of religion, as well as justice in political and social institutions.

It employs methods of the study of religions, the humanities and social sciences to examine the Christian heritage and its relevance for today. In the research on biblical texts, their origin and cultural background, as well as the history of their interpretation and reception, are specif-

ically taken into account. The academics at the Faculty maintain an exchange with experts in antiquity studies, archaeology, historical philology and ancient oriental studies, as well as in history of art, German studies, and for text analysis, they use methods taken from modern linguistics and language studies. With regard to biblical studies, the diverse movements of Judaism provide essential input. The study of the further history of Christianity includes the examination of texts, ways of living, church life, as well as church structures, in addition to different theological lines of argument and spiritual approaches. Due to the specific location of the Faculty, situated between Western, Eastern and Southern Europe, Eastern Church theology and liturgy, with which we share roots in the history of Christianity, play an important role in research and teaching. Interdenominational research is also supported by the fact that the University of Vienna houses the largest theological library in Central Europe. A further special focus is on the study of texts, concepts and key church policy decisions of the Middle Ages, which is researched in an exchange with the related disciplines of medieval studies.

The role of religion in processes of societal change is examined in the context of interdisciplinary empirical research into values, as well as in the form of commitment to questions of human rights issues. In an exchange encompassing different faculties, the Faculty also addresses questions of gender studies in a number of individual subjects, with the goal of advancing gender equality in society and Church. In the study of religions, the history and the anthropological as well as socio-cultural contexts of different religions and other systems that strive for purpose are a particular focus, and the subject of systematic comparison. In cooperation with researchers of the Faculty of Protestant Theology, experts in Orthodox theology, Jewish studies, Islamic theology, religious education and Islamic studies, the experts at the Faculty actively contribute to the academic discourse on the role of religions in the public sphere and the dialogue between different world-views. In an exchange between the perspectives of theology and religious studies, they also enable academic approaches to a constructive cooperation between church-based Christianity and secular institutions. In their research on ecclesiastical law and law of religion, they focus on the relationship between the church and state structures.

4.1.2 Key Research Areas

The Faculty of Catholic Theology focuses on two key research areas from an interdisciplinary perspective.

Discourses of Christian identity – a modern perspective

In the context of this key research area, the term ‘modern’ refers to the period extending up to the present day. The academics in this area study the complex relationships between Christianity and modernity, from processes of mutual understanding to polarising discourses with a focus on differences. Questions of specific interest here are as to how theology has embraced certain theories of modernism, how Christian identity can be defined in regard of a modern historical perspective, and also what form this discourse continues to take in certain areas of Christianity. This research area investigates the concept of the modern period and explores the philosophical discourse of modernism and its relevance for Christian theology. Key junctures in the history of theology are researched with regard to explicit or unadmitted definitions of their relationship to modernity. In an analysis based on systematic theology it becomes apparent how key elements of Christian faith are explicitly reflected in a modern context. This dynamic also provides the background for theological and ethical arguments in which secular, intercultural and interreligious communication contexts that are characteristic of the modern period are critically contrasted with an ethos founded in religion.

Religion and transformation in contemporary society

In the key research area of religion and transformation, researchers of the Faculty of Catholic Theology, in close cooperation with academics from other faculties, examine current social and religious processes of transformation and their interactions. This is achieved by means of empirical methods as well as by systematic comparison and hermeneutic text-related methods. The focal question is to what extent religions have formed and changed the narratives and symbolic structures of present-day society. It is also examined how religions have (re)acted in view of global challenges of the present day (disappearance of traditional borders and boundaries, environmental problems, the dialectic of processes of enlightenment, secularisation, multiculturalism, urbanisation, technological progress and identity crises), and how this is reflected in ethical, political, legal and aesthetic public discussions. This is illustrated by religious transformative processes and their potentials for social inclusion and exclusion in the religious culture of the present day in Austria, as well as with regard to migrant communities in

education and school contexts. 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.

4.1.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Biblical Studies (New Testament)
- Biblical Studies (Old Testament)
- Christian Philosophy
- Church History
- Dogmatics
- Ethics and Christian Social Teaching
- Fundamental Theology
- Liturgical Studies and Sacramental Theology
- Moral Theology
- Pastoral Theology
- Patrology and Studies of Eastern Churches
- Religious Education and Catechetics (joint appointment with the Centre for Teacher Education)
- Study of Religions
- Theology of Spirituality

4.1.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Ecclesiastical Law and Law of Religion

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

Subject dedication of professorship:
Eastern Christian Studies

Time of appointment: following vacancy of the Professorship of Patrology and Studies of Eastern Churches (presumably as of 1 October 2018)

Subject dedication of professorship:
Christian Philosophy

Time of appointment: following vacancy of the Professorship of Christian Philosophy (presumably as of 1 October 2018)

Subject dedication of professorship:
New Testament Studies

Time of appointment: following vacancy of the Professorship of Biblical Studies (New Testament) (presumably as of 1 October 2020)

Subject dedication of professorship:

Social Ethics (cooperation with the Faculty of Philosophy and Education with regard to advertising and recruiting)

Time of appointment: following vacancy of the Professorship of Ethics and Christian Social Teaching (presumably as of 1 October 2020)

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)

Further professorships subject to availability of funds

Subject dedication of professorship:

Sociology of Religion (joint appointment with the Faculty of Protestant Theology; cooperation with the Faculty of Social Sciences with regard to advertising and recruiting)

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 religion). 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 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, by 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. Therefore 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 and of 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 religion, psychology of religion, sociology of religion, as well as philosophy of religion and education). 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 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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 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

The dedication of professorships at the Faculty of Protestant Theology by the University of Vienna is subject to section 38, para. 2 of the 2002 Universities Act.

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

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

Subject dedication of professorship:
Study of Religions
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)

Further professorships subject to availability of funds

Subject dedication of professorship:
Sociology of Religion (joint appointment with the Faculty of Catholic Theology; cooperation with the Faculty of Social Sciences with regard to advertising and recruiting)

4.3 Faculty of Law

4.3.1 Objectives

With regard to the number of students, the Faculty of Law of the University of Vienna is the largest law faculty in the German-speaking world. It regards itself as the leading faculty of law in Austria and is highly visible at the international level. Its position is not only reflected in the wide range of subjects taught, but is also regarded as conferring a certain responsibility on the Faculty to conduct excellent academic research in a variety of subjects.

In accordance with the Faculty's obligation towards society, it places a focus of its teaching on students' academic preparation for future employment and training in the traditional law professions. 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 require close collaboration between different fields of law.

The Faculty of Law generally aims to intensify its exchange with practitioners in the field of law to contribute to applied research at the national, European and international level. At the same time, the Faculty is committed to an orientation towards basic research in all areas. The Faculty also aims to enhance its predominant position with regard to the output of law publications in Austria. 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.

This, not least, is of benefit to the teaching process, which must thus be research-led in the best sense of the word, and be able to prepare graduates for the professional life of tomorrow and beyond, as well as to contribute to the support of early-stage researchers.

The Faculty also attaches specific importance to 'third mission' concerns, which enables numerous links to research and teaching. In research, an intensive, continual transfer of knowledge to legal practice is taking place, by means of publications and lectures that also target non-university audiences, and faculty members communicate legal insights to the media and interested members of the public.

4.3.2 Thematic Areas and Key Research Areas

For the above reasons, the key research areas of the Faculty of Law of the University of Vienna have to be seen in the context of the need to preserve and advance the broad approach to university-based research and teaching.

The existing areas of law that are currently covered by research at the Faculty are also determined by the relevant legal framework. This essentially determines the areas on which research is concentrated. Here, basic research and application-oriented research are equally relevant and closely linked to each other.

A faculty of the size of the Faculty of Law at the University of Vienna needs to represent comprehensive expertise in the area of research as well.

In its key research areas, the Faculty of Law primarily investigates questions of European and international concern. In the individual areas of research, subjects of international relevance play an important role. When researching questions of cross-border nature the Faculty increasingly cooperates with other institutions.

Besides continuing and intensifying its research activities across the entire field of law, the Faculty has defined the following key research areas and intends to build or use both interdisciplinary and intradisciplinary networks in this context.

Health and medical law, bioethics and biotechnology law

The problem of the provision of comprehensive health care is not restricted to Austria, but is an issue in all countries of the European Union. International developments should also be taken into account. Research in this area is thus a particularly good example of international and interdisciplinary cooperation. In addition, due to the increase of cross-border activities in the health-care sector (for instance, in medical

research, in the pharmaceutical market or with regard to organ and tissue donation) 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 (e.g. organisation of the health-care system, professional rights of health-care staff, hospital law, informed consent, confidentiality and data protection, liability under civil law and criminal law, law of pharmaceutical products and medical devices, legal end-of-life questions, rights of the dead, combating contagious diseases, coercive measures in medical and care contexts) in an interdisciplinary way. 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) that need to be investigated and taught appropriately from a legal point of view, across the boundaries of the traditional law subjects. The corresponding aspects of legal ethics are also included, with regard to the demographic changes in society as well.

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.

Codes of private law

Whereas the aim of the major private law codes of the 19th century was to provide systematic private law legislation in a conclusive code of law, in the present day private law is characterised by pronounced fragmentation. The Austrian Civil Code (ABGB), which continues to be selectively amended, and in part recoded, has been complemented by numerous special laws, particularly in the area of consumer protection law. This arose from the need to adapt private law to changes in the social and economic framework, and for implementing European legislation. Today, private law has become a multi-layered matter 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 laws are consistent with the existing legal framework, to preserve its



systematics, enable practical applicability and guarantee legal certainty.

It has been a long-standing tradition of the Faculty of Law of the University of Vienna to provide expert consultancy services to the legislator when comprehensive reform projects are embarked upon, to initiate reforms, to answer the legal questions that always arise in reform projects, to find practical solutions for implementation and to prepare reform projects by research based on comparative law, history of law and European law. This key research area is therefore 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 (ELI). Recent examples of input in this field include the reform of inheritance law, adult protection law, family law, loan agreement law, consumer protection law and law of damages.

Europeanisation of commercial law and business law

The developments of law in Europe have brought about a considerable need for adaptation, in particular regarding commercial law, in several main areas of 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 brought about a continuing harmonisation and unification in commercial law and business law, which constitutes a specific challenge for the academic field of law. This particularly applies to listed companies, technology-affiliated sectors and antitrust law. After an initial wave of seminal decisions, the influence of fundamental freedoms on corporate law has again been the focus of attention.

The above examples illustrate both a continuous increase in the extent of regulation in commercial law and business law and a new quality in the harmonisation of law at the European level. This goes hand in hand with a Europeanisation of law as an academic discipline: The discourse here is characterised by activities in the area of comparative law, and the search for best-practice examples; and input from law and economics as well as principles-based regulation have become increasingly important. The withdrawal of the United Kingdom from the EU has brought about a specific dynamic in this regard.

The dynamics of national and international law enforcement and dispute resolution

Globalisation has brought about an increasing number of proceedings that include cross-border and other international aspects. As a response, this key research area focuses on the international dimension of proceedings, the Europeanisation of procedural law, compara-

tive procedural law as well as the links between private international law and international civil procedure. Particular importance is to be attached to mechanisms of out-of-court dispute resolution with international aspects. This key research area also integrates the historical development of conflict resolution mechanisms.

However, in the changing society of the present, the traditional mechanisms of law enforcement (proceedings by authorities, followed by a decision and enforcement of this decision) have increasingly often turned out to be insufficient – and not only in international contexts. On the one hand, resolution of conflicts by public authorities, whether rightly or wrongly, is often regarded as an expression of the current political power relations and thus as not oriented towards the concrete situation of the people concerned, and consequently unjust. On the other hand, in all but a few areas of society, decisions issued from above by authorities have increasingly often 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 conflict-resolution procedures (alternative dispute resolution, diversion in criminal proceedings and conflict resolution in general).

These developments have had far-reaching effects on the entire fields of civil, administrative and criminal proceedings. There is evidently a need to find new strategies of law enforcement so that compromise reached in this way will also be accepted by society as a legally binding solution. 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 relates to fundamental subjects (legal philosophy, law of religion and culture, history of law, Roman law and ancient legal history) and aims at gaining further insights into European perspectives of legal development. Particular attention is paid to aspects that can be understood as specific features of European legal culture in the context of European integration. This requires enhanced reflection and research on dimensions of legal culture in a wider European context. The instruments to meet this end primarily include longitudinal (history of law) and cross-sectional (comparative law) comparison and the analysis of modern regulations and institutions on the one hand, and of the specific historical conditions and

developments in which they are rooted and from which they have evolved on the other. In this way common basic structures of European legal systems can be identified. This involves all fundamental subjects of law.

The fact that international contexts have increased in importance and that the interaction between European law and national law has grown also poses a great challenge for methodology. The Faculty of Law at the University of Vienna has always attached great importance to methodological questions. This methodological tradition will be continued – taking into account new challenges –, critically assessed and developed further.

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

The increase of international migration and the resulting changes in society involve manifold challenges for the field of law across the entire legal system. The question arises as to which instruments the state can use to control and direct migration in all its forms, i.e. from forced migration to labour migration, family migration and educational migration, while taking into account its obligations under international law, European law and fundamental rights. This leads to a variety of further questions regarding labour market regulations, migrants' access to the social care system and the educational system, their position in the housing market and their social integration. Finally, the question remains as to what this means for a society in which pluralism is growing while cultural and religious conflicts are increasing. This key research area studies these questions with regard to Austrian positive law and also from the perspective of comparative law, history of law and legal philosophy.

Anti-discrimination law and legal gender studies

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

However, gender continues to be of special relevance as it is always visible, and it has continued to have massive consequences, due to views of gender differences as an aspect of power relationships that are rooted in traditions and are socially consolidated in many ways all over the globe. It is a key task of legal gender studies to contribute a critical analysis of this dimension of

power, with regard to legal questions. To begin with, the basic question of how gender is established in law needs to be studied, 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 workers’ protection 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 cohabitation, marriage or a registered partnership. The perspectives of legal dogmatics are expanded and intensified by including aspects of the history of law and legal philosophy, for instance with regard to the admissibility of quotas, or legal questions concerning the coexistence of people with different religious and cultural backgrounds, often with 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 review the issue of protecting fundamental rights and human rights. This key research area is ready to meet these challenges.

Digital economy – digital law

As human interactions, assets and business transactions increasingly often move from the real to the digital world, and as the digital and real worlds are converging, responses on the part of the law are also called for. The legal system must be able to solve emerging legal problems and guarantee legal certainty and a worthwhile life for the citizens in the digital future. Legal questions concerning models for sharing-economy agreements, smart contracts, 3D printing, data business, the Internet of Things, artificial intelligence and robotics,



social media and personality rights, crowd-working, cybercrime, new requirements for tax law, corporate knowledge organisation and the completion of the digital single market, which the European Commission has identified as a priority, as well as anti-trust issues, constitute challenges that will determine the future and will require a fundamental examination of both the law as it is and the law that is to come into force, taking European and international developments into account. In addition, digitalisation has effects on the structure of the law and the form in which it appears, which again influences legal thinking. All these aspects need to be researched, encompassing different subjects in an interdisciplinary way.

4.3.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Austrian and European Legal History
- Business 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 Market Law with Special Emphasis on Europeanisation
- Comparative Law in the European Area; in Particular in the Member States of the European Union with Regard to Substantive Civil Law and Private Business Law
- Comparative Private Law and International Private 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 III
- Criminal Law, Law of Criminal Procedure and Criminology
- Criminology and Criminalistics
- European Law
- Financial Law
- General Private Law
- General Private Law
- General Private Law

- History of Law
- International Law
- International Law International Tax Law
- Labour Law and Law of Social Security
- Labour Law and Law of Social Security
- Law of State and Constitution, and Administrative Law
- Law of State and Constitution, and Administrative Law
- Legal Philosophy and Legal Gender Studies, section 99, para. 3 of the Universities Act (temporary: for six years)
- Legal Philosophy and Methodology of Legal Studies
- Medical Law
- Public Law
- Public Law with Special Emphasis on Economic Administrative Law
- Roman 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 2017

- Ancient Legal History and Roman Law
- International Business Law
- International Law

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

Subject dedication of professorship:

Private Law, Private International and Comparative Law

Time of appointment: following vacancy of the Professorship of Comparative Law in the European Area; in Particular in the Member States of the European Union with Regard to Substantive Civil Law and Private Business Law (presumably as of 1 October 2018)

Subject dedication of professorship:

European and International Civil Procedure

Time of appointment: following vacancy of the Professorship of Civil Procedure in accordance with section 99, para. 1 of the Universities Act (presumably as of 1 January 2019)

Subject dedication of professorship:

Labour 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 2019)

Subject dedication of professorship:
Romanistic Foundations of European Private Laws

Time of appointment: following vacancy of the Professorship of Roman Law (presumably as of 1 October 2019)

Subject dedication of professorship:
Medical Law

Time of appointment: following vacancy of the Professorship of Medical Law (presumably as of 1 October 2020)

Subject dedication of professorship:
Austrian and European Legal History

Time of appointment: following vacancy of the Professorship of Austrian and European Legal History of Law (presumably as of 1 October 2021)

Subject dedication of professorship:
Criminal Law and Law of Criminal Procedure

Time of appointment: following vacancy of the Professorship of Criminal Law and Law of Criminal Procedure III (not before 1 October 2021)

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:
Civil Law

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

Subject dedication of professorship:
Constitutional and Administrative Law

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

Future professorships subject to availability of funds

Subject dedication of professorship:
Innovation and Private Law

Subject dedication of professorship:
Innovation and Public Law

Subject dedication of professorship:
Globalisation and Legal Pluralism

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 analysis 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 academic affiliations, 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 states and enterprises in the context of a global competition that is becoming increasingly intensive. 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 agreement-based 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, which is a process in itself, and coordinates corporate organisation and value-added activities, and orients them towards environmental conditions that are changing increasingly fast. Apart from strategic management itself, this is particularly relevant to technology and innovation management, as well as to supply chain and operations management. However, input obviously comes from all other disciplines of business administration and several disciplines of economics as well, for instance industrial organisation and labour market economics.

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 eco-



conomic actors bring about strategic behaviour. The management of resources is aimed 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.

Statistics and risk analysis

At a time where big data are available from almost all social areas, and are becoming increasingly complex (high-dimensional data), it is more urgent and more important than ever to develop appropriate statistical methods to transform data into information. Together, big data and high-dimensional data pose new challenges for the development of methods of estimation and inference. This particularly applies to econometric applications, for instance in the field of high-frequency financial transaction data or portfolio selection. The terms ‘risk analysis’ and ‘risk management’ comprise a large group of statistical and stochastic optimisation methods for modelling and controlling uncertainty and risk. Their application plays a key role in the analysis of currency, securities and energy markets, banks and insurance funds, as well as other financial institutions, corporate finance, and also logistics and operations management.

4.4.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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
- Business Administration – Finance [Corporate Finance]
- Business Administration – Personnel Management [International Personnel Management]
- Business Administration – Production and Logistics with International Focus
- Business Administration [Industry, Energy and Environment]

- Business Administration [Management Control]
- Business Administration [Marketing]
- Business Administration [Organisation and Planning]
- Business Administration [Production and Operations Management]
- Business Administration [Strategic Management]
- Civil Law with Special Emphasis on Business Law [Civil Law and Business Law]
- Computer Processes [Statistics]
- 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 and 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]
- Statistics

4.4.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Behavioural Economics with Applications in Austrian Economic Policy
- Business Administration – Financial Accounting
- Business Administration – Service Management/Financial Services

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

Subject dedication of professorship:
Business Administration – Technology and Innovation Management

Time of appointment: funding via a vacant professorship at the Faculty (presumably as of 2018)

Subject dedication of professorship:
International Business

Time of appointment: following vacancy of the Professorship of Business Administration IX (presumably as of 1 October 2018)

Subject dedication of professorship:
Statistics and Stochastic Optimisation

Time of appointment: funding via vacant academic positions at the Faculty (presumably as of 1 October 2018)

Subject dedication of professorship:
Statistics with Applications, in Particular in Business Administration and Economics

Time of appointment: following vacancy of the Professorship of Computer Processes (presumably as of 1 October 2019)

Subject dedication of professorship:
Marketing

Time of appointment: following vacancy of the Professorship of Business Administration V (presumably as of 1 October 2020)

Subject dedication of professorship:
Empirical Macroeconomics

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

Subject dedication of professorship:
Mathematical Methods of Operations Research

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

Subject dedication of professorship:
International Marketing

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

Subject dedication of professorship:
Production and Operations Management

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

Subject dedication of professorship:
Financial and Tax Law

(cooperation with the Faculty of Law with regard to advertising and recruitment)

Time of appointment: following vacancy of the Professorship of Financial and Tax Law (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:
Organisation and Planning

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

Future professorships subject to availability of funds

Subject dedication of professorship:
Business Analytics

Subject dedication of professorship:
Environmental and Energy Economics

Subject dedication of professorship:
Microeconometrics

Subject dedication of professorship:
Quantitative Risk Management

Subject dedication of professorship:
Law and Economics

4.5 Faculty of Computer Science

4.5.1 Objectives

The Faculty covers a great variety of subjects in the areas of both computer science and its fields of application. 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 business informatics, with business, economics and statistics;
- in media informatics, with mass media and communication science as well as theatre, film and media studies;
- in data science and scientific computing, with mathematics, chemistry, biology as well as business, economic and statistics;
- in bioinformatics, with mathematics, chemistry and biology;
- in computational science, with mathematics, chemistry, biology, physics, astronomy, earth sciences and pharmacology;
- in medical informatics, with medicine at the Medical University of Vienna.

Further cooperation networks include links with law, nursing science, psychology and the Centre for Teacher Education. The Faculty also cooperates with the fields of neurobiology and psycholinguistics to establish and expand the field of neuro/cognitive sciences at the University of Vienna.

The research activity of the Faculty follows an international approach, and active cooperation structures have been established with other universities and research institutions at national and international levels. The relationship between basic research and applied research needs to be well balanced. Technology transfer activities will contribute to the sustainable effects of the research activities.

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: computing, knowledge and systems.

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.

Knowledge: The area of knowledge comprises all structures and processes of computer science that make it possible to collect, organise, process, analyse, make available and distribute knowledge in all its shapes and forms and also permits the generation of new knowledge through processes of learning and cooperation.

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.

In these three fields, the Faculty of Computer Science focuses on the following key research areas, which promise a good potential for development.

Distributed and multimedia systems

Information and communications technology forms an integral part of everyday life. Ubiquity has increasingly become a key characteristic of information processing systems and the resulting new challenges, for instance increasingly complex systems, and the handling of large quantities of data (including multimedia data), have to be met. For this reason, aspects of quality, architectures, data models, visualisation and security of distributed and multimedia systems have been gaining importance in both IT research and in application. The convergence of media and networking technology is expected to increase further and, consequently, a comprehensive, system-oriented view with an interdisciplinary orientation will become even more important. Aspects of human-machine interaction and media perception will be particularly relevant in this context.

The Faculty will meet all these challenges in its key research area of distributed and multimedia systems. On the one hand, it examines technology-oriented questions with regard to the Internet of the future, service-oriented systems, cloud computing, cooperative systems, IT infrastructure for Industry 4.0, massively distributed autonomous system infrastructures, e.g. for the Internet of Things or blockchain applications, as well as entertainment. On the other hand, the application of these systems and its economic effects also have great potential for research.

Advanced laboratories: 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.

Experimental environments: Applications are developed in experiments and evaluated in order to support the transfer of technological approaches and scientific findings from the academic world to business and to enable their economic exploitation.



Algorithms, software and computing technologies

The modelling, analysis, visualisation, simulation and optimisation of complex processes, data structures and dynamic data streams that occur in nature, science and technology as well as industrial processes, continually require new technologies. In order to develop and apply those technologies, the Faculty's key research area of algorithms, software and computing technologies focuses on basic algorithm and software technologies in computer science as well as in the areas where computer science overlaps with other university-based research activities in the fields of computational science and data science. The corresponding research focuses on the following mutually complementary subareas:

With regard to the wide range of computer architectures, from work stations to parallel computers and super computers as well as heterogeneous distributed systems and cloud infrastructures, the focus is on the necessary programming approaches and systems. In the area of methodology and algorithms, the development and adaptation of new algorithmic structures in both numerical and combinatorial areas are of key relevance. As far as the processing of complex data structures and dynamic data streams in bioinformatics, business informatics and (social) science are concerned, new methods in the area of data integration, data mining and machine learning as well as visual data analysis and human-centred design are of particular interest.

Special fields of application of this key research area include, in particular, the processing of very large data quantities, simulation and computer-aided verification of hardware and software as well as manifold Internet applications.

Knowledge-based methods and technologies for digitalisation

This key research area works on the assumption that the real and the digital worlds will converge further in the future. It primarily focuses on research questions that arise in the course of this process of transformation.

In the context of an all-encompassing approach to engineering, the focus of this key research area is on the concepts of knowledge, methods and technologies. Digitalisation, i.e. the interaction of ICT with goods and services (the Internet of Things), results in a complex distributed ecosystem, which needs to be supported by increasingly advanced information 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. On this basis, a structure has been defined in which the subject areas are bundled as enabling approaches; advanced laboratories as well as experimental environments that are used for the prototypical implementation and validation of the solutions that have been developed.

Enabling approaches include research on and development of approaches, methods and instruments for the areas of business intelligence, cloud models, experimental and technology-enhanced learning, flexible and connected processes, intelligent and agile agents as well as semantic technologies.

Advanced laboratories: 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.

Experimental environments: The focus is on the practical application of research results, particularly with regard to the Internet of Things, cyber-physical systems, and factories of the future.

4.5.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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
- Biochemical Modelling (joint appointment: 50 %; 50 % at the Faculty of Chemistry)
- Bioinformatics (20 %; 80 % at the Max F. Perutz Laboratories)
- Business Informatics I
- Business Informatics II
- Computational Science – Algorithmics and Information and Communication Technology
- Computational Science – Mathematical Modelling and Algorithmics in Application Areas (joint appointment: 50 %; 50 % at the Faculty of Mathematics)
- Computational Technologies and Applications
- Computer Science
- Computer Science (Cooperative Systems)
- Computer Science (Work Flow Systems)
- Data Mining
- Scientific Computing – Parallel and Distributed Systems
- Software Architectures

4.5.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Communication Technologies
- Didactics of Computer Science (cooperation with the Centre for Teacher Education)
- Neuroinformatics

Future professorships subject to availability of funds

Subject dedication of professorship:
Security and Privacy

Subject dedication of professorship:
Machine Learning
(joint appointment with the Faculty of Mathematics)

Subject dedication of professorship:
Theoretical Computer Science

Subject dedication of professorship:
Human-Computer Interaction

Subject dedication of professorship:
Internet Computing

Subject dedication of professorship:
Quantum Software Computing Concepts
(cooperation with the Faculty of Physics with regard to advertising and recruitment)

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

Subject dedication of professorship:
Digital Philology
(joint appointment with the Faculty of Philological and Cultural Studies)

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 creative 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 publications (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-specific 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. Numerous types of cooperation also exist within the Faculty and between different subjects, for instance with archaeology, which is of particular relevance in the areas of teaching with regard to methodology education. Furthermore, many 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 both 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 also to 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 – however important the reflection on Europe's particular

role may be. 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 against the geopolitical background 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 non-university resources for research that are available in Vienna, and in view of traditional links with Mediterranean regions. Pursuing global approaches is not only a necessity for a modern university in a capital city of the 21st century, but also an appropriate research perspective for the present day, as is reflected in the key research area of global history: For instance, the research focus on Asia (based on numerous projects in regional cultural studies and area studies) also permits the investigation of historical ties, and opens up new perspectives across different nations and beyond disciplines. 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 is important for numerous area studies, e.g. in the Faculty of Philological and Cultural Studies, as are its thematic areas on European cultures and identities, global cultures and identities, and the key research area of cultural and social 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: community, conflict, integration; dictatorships, violence, genocide; economy and society from the perspective of historical and cultural studies; and women's and gender history. 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. This includes 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-dictatorial processes of change and coming to terms with the past. Specific attention is paid to the 20th century as the 'epoch of violence'. In the key research area of economy and society from a historical and cultural perspective, 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 category of social order that is defined performatively. Cooperation links, for instance with the key research area of gender and transformation at the Faculty of Social Sciences, contribute input of great worth 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 research institution. Cooperation also exists in 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 sources of tradition and of communication, and as expressions and phenomena of cultural history. The types and origins of these sources are indeed diverse – some of them (still) remain in the landscape or under the soil, and 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 examination and interpretation of these sources requires special theories and methods that need to be determined in an interdisciplinary dialogue. Work in the field of media is essential as it forms the basis of 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 may thus convey meaning and, when viewed against the background of history, may be understood in more detail. In the present day, the cultural history of communication, illustrated by its material evidence, is a subject of immediate relevance. This thematic area is studied particularly in the key research areas of material culture, and visual cultural history: cultures and media of the visual; and 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 social science at the Faculty of Social Sciences, with the focus on photography and film, complement each other.

4.6.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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 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
- Didactics of History (cooperation with the Centre for Teacher Education)
- Digital Humanities
- Early Modern Art History (with Focus on Baroque)
- Economic and Social History
- Egyptology (with a Focus on Archaeology)
- Etruscology and Studies in Italic Classical Antiquity
- European Ethnology
- Greek History, Antiquity Studies and Epigraphics
- Historical Ancillary Disciplines with a Focus on the Middle Ages
- History and Theory of Media Cultures (18th to 20th Centuries)
- History of East Central Europe/'Nation Building'
- History of South-Eastern Europe
- History of the High and Late Middle Ages
- Human Prehistory
- 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 Economic and Social History
- Medieval History and Ancillary Disciplines
- Modern Art History
- Modern Economic and Social History
- Modern Greek Studies

- Modern History – Women's and Gender History
- Modern History II
- Modern History with a Focus on the Early Modern Period
- 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 2017

- Contemporary History – Dictatorships – Violence – Genocides
- Contemporary History: Cultural History – History of Knowledge and Gender History
- Economic and Social History with a Focus on the History of the World Economy in the 19th and 20th Centuries
- Everyday Cultures in their Historical Dimensioning
- Global Economic and Social History
- Modern History: History of Science

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

Subject dedication of professorship:
Classical Archaeology

Time of appointment: following vacancy of the Professorship of Classical Archaeology (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:
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 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:
Austrian 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
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:
Modern History – Women's and Gender History
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
Time of appointment: following vacancy of the Professorship of Prehistoric and Protohistoric Archaeology (presumably as of 1 October 2024)

Future professorships subject to availability of funds

Subject dedication of professorship:
Public History

Subject dedication of professorship:
Cultural Heritage

Subject dedication of professorship:
Transdisciplinary Theories and Methodologies in Historical Cultural Studies

Subject dedication of professorship:
Historical Transregional Studies

Subject dedication of professorship:
Environmental History



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; and 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 neurosciences. In the future, the Faculty aims to intensify its inter-faculty networks in the context of the digital humanities.

In addition to a wide range of bachelor- and master-level degree programmes, as well as a broad doctoral programme, the Faculty contributes to teacher education in many teaching subjects, 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 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, 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. The East Asian studies focus on the present day; and with regard to Southern Asia, the Middle East and Northern Africa, the aspects of contemporary cultural and social 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 areas of 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 neurosciences.

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 to 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 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 that is increasingly becoming the focus of its methodological reflections when discussing the challenges of the digital era. The resulting social, political and, again, aesthetical dimensions of this dynamic play a central role in its 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 philologies, theatre, film and media studies as well as musicology.

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 on language and its investigation as a socially embedded means of communication.

After establishing the area of psycholinguistics 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 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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
- Arabic Studies
- Assyriology (Focus on Akkadian Studies)
- British Literature
- Chinese Studies (80 %; 20 % at the Centre for Translation Studies)
- Chinese Studies with Emphasis on Social Studies
- Classical Philology (Greek)
- Classical Philology (Latin)
- Classical Philology (Latin) and Medieval Latin
- Comparative Indo-European Linguistics
- Comparative Literature
- Comparative Literature
- Comparative Musicology (Ethnomusicology)
- Contemporary English Literature
- Cultural and Intellectual History of Modern South Asia
- Cultural History of Audio-Visual Media
- Dutch Studies
- East Asian Economy and Society
- Eastern Slavic Literature
- English and American Language and Literature (Linguistics)
- English and Anglophone Literatures

- English Linguistics (joint appointment with the Centre for Teacher Education)
- English Linguistics: Variation and Cognition
- Finno-Ugric 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
- Intermediality
- 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
- Modern German Literature
- Modern German Literature
- Modern German Literature (Theory of 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 Historical Musicology
- Modern Latin Philology and Classical Latin Studies
- Musicology with Special Emphasis on Medieval Historical Musicology
- Romance Linguistics and Communication Science
- Romance Philology II
- Romance Philology III (with Special Emphasis on Hispanic Studies)
- Romance Studies (Linguistics)
- Russian Philology and Eastern Slavic Linguistics
- Scandinavian Studies
- Slavic Literature
- 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 Studies and Buddhist Studies
- Western Slavic Linguistics

4.7.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- English Cultural and Literary Studies
- English Language Education (joint appointment with the Centre for Teacher Education)
- Film Theory
- German Linguistics (Contemporary German)
- Psycholinguistics
- Romance Linguistics: Interculturality and Multilingualism
- South Slavic Literature and Cultural Studies (with an Emphasis on Philology)
- Turkish Studies

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

Subject dedication of professorship:
Modern German Literature with Special Emphasis on the Theory of Literature and Media Studies

Time of appointment: following vacancy of the Professorship of Modern German Literature (Theory of Literature) (presumably as of 1 October 2018)

Subject dedication of professorship:
Comparative Literature with Special Emphasis on Hungarian Literature

Time of appointment: funding via vacant academic positions at the Faculty

Subject dedication of professorship:
Dutch Studies

Time of appointment: following vacancy of the Professorship of Dutch Studies (presumably as of 1 October 2019)

Subject dedication of professorship:
Western Slavic Literature and Cultural Studies

Time of appointment: following vacancy of the Professorship of Slavic Literature (presumably as of 1 October 2020)

Subject dedication of professorship:
French and Spanish Literature and Cultural Studies

Time of appointment: following vacancy of the Professorship of Romance Philology III (with Special Emphasis on Hispanic Studies) (presumably as of 1 October 2020)

Subject dedication of professorship:
Chinese Studies

Time of appointment: following vacancy of the Professorship of Chinese Studies (presumably as of 1 October 2020)

Subject dedication of professorship:
Modern German Literature with Special Emphasis on the 17th and 18th Centuries
Time of appointment: following vacancy of the Professorship of Modern German Literature (presumably as of 1 October 2020)

Subject dedication of professorship:
Digital Media Theory/ Digital Media Aesthetics
Time of appointment: following vacancy of the Professorship of Intermediality (presumably as of 1 October 2020)

Subject dedication of professorship:
Modern German Literature with Special Emphasis on Austrian Literature
Time of appointment: following vacancy of the Professorship of Modern German Literature with Special Emphasis on Austrian Literature (presumably as of 1 October 2020)

Subject dedication of professorship:
Eastern Slavic Linguistics (with Special Emphasis on Russian)
Time of appointment: following vacancy of the Professorship of Russian Philology and Eastern Slavic Linguistics (presumably as of 1 October 2021)

Subject dedication of professorship:
French and Italian Literature and Media Studies
Time of appointment: following vacancy of the Professorship of Romance Philology (presumably as of 1 October 2021)

Subject dedication of professorship:
Applied Linguistics of Contemporary English
Time of appointment: following vacancy of the Professorship of English and American Language and Literature (Linguistics) (presumably as of 1 October 2021)

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:
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 and Buddhist Studies
Time of appointment: following vacancy of the Professorship of Tibetan Studies 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)

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.

The present Professorship of Islamic Religious Education extends beyond the time covered by this *Development Plan*. For the other five 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*) Including Philosophy and Mysticism
(cooperation with the Faculty of Philosophy and Education with regard to advertising and recruitment)

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

Future professorships subject to availability of funds

Subject dedication of professorship:
Yiddish Literature and Cultural Studies

Subject dedication of professorship:
Neuro-Mediality

Subject dedication of professorship:
Digital Philology
(joint appointment with the Faculty of Computer Science)

4.8 Faculty of Philosophy and Education

4.8.1 Objectives

Research and teaching at the Faculty is positioned in the landscape of 21st-century knowledge. Philosophy and education have always been closely linked throughout the history of Western civilisation, and their self-conception has 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. In this context, both basic research and application-oriented research take place. 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.

Finding new answers to phenomena of the social and cultural worlds, questions of normativity and ethical problems that continue to grow in the rapid change of technology and ways of life, questions with regard to the conflict between

cultural identity and global networks, human rights, education and educational processes, diversity and inclusion at school and in society, as well as gender issues: These are the challenges that the academic world is facing in the present day, 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 the research-based investigation 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 its philosophical subunit 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'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, law and politics

Research in this key area focuses on the justification and critique of moral, 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, philosophy of law 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.

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

This key research area studies epistemology and the philosophy of natural and social sciences as well as of culture 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 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, 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.

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 way 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) 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 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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
- 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
- Historical and Comparative Research on Education and Schooling
- History and Philosophy of Science (History, Philosophy and Theory of Science) (joint appointment: 50 %; 50 % at the Faculty of Historical and Cultural Studies)

- Media Education with Special Emphasis on New Media
- Methods of Teaching Philosophy and Ethics
- Philosophy in a Global World
- Philosophy of Media and Technology
- Political Philosophy and Social Philosophy
- Research on Schooling and Teacher Education; section 99, para. 3 of the Universities Act (temporary: for six years) (joint appointment with the Centre for Teacher Education)
- Research on Schooling with Special Emphasis on Upper Secondary Education (joint appointment with the Centre for Teacher Education)
- Special Needs and Inclusive Education
- Theoretical Philosophy

4.8.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Education and Inequality
- Philosophy of Science
- School Pedagogy with Particular Emphasis on Social, Cultural and Linguistic Diversity (cooperation with the Centre for Teacher Education)

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

Subject dedication of professorship:

Philosophy and Ethics in School and Society

(cooperation with the Centre for Teacher Education with regard to advertising and recruitment)



Time of appointment: following vacancy of the Professorship of Methods of Teaching Philosophy and Ethics (presumably as of 1 October 2018)

Subject dedication of professorship:
Inclusive Education and Disability Research
(cooperation with the Centre for Teacher Education with regard to advertising and recruitment)
Time of appointment: following vacancy of the Professorship of Special Needs and Inclusive Education (presumably as of 1 October 2020)

Subject dedication of professorship:
Comparative Research on Education and Schooling
(cooperation with the Centre for Teacher Education with regard to advertising and recruitment)
Time of appointment: following vacancy of the Professorship of Historical and Comparative Research on Education and Schooling (presumably as of 1 October 2020)

Subject dedication of professorship:
European Philosophy
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)

Future professorships subject to availability of funds

Subject dedication of professorship:
Early Childhood Education

Subject dedication of professorship:
Contemporary Metaphysics

Subject dedication of professorship:
Moral and Political Philosophy

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 Faculty's 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 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 obtaining insight into the psychological mechanisms and effects of societal, social and technological change on experience and behaviour. Examples of fields of action, in which knowledge about the underlying psychological processes will be of great relevance, include health promotion and maintenance, demographic change, and media/digitalisation. It should thus be apparent that the Faculty explicitly considers social responsibility (and thus the third mission) as to be one of its objectives.

In addition to conducting research into genuine psychological aspects of the aforementioned subjects (e.g. the psychological demands of demographic change or the effects of increasing digitalisation on emotion and cognition), the Faculty also aims to investigate these areas in cooperation with international researchers and with affiliated disciplines (e.g. biology, education, sociology and medicine). This involves a wide variety of methodological approaches, with integrative methods regarded as particularly promising. Consequently, a high-quality research infrastructure is of great importance and represents a decisive factor for the Faculty's success. Over the next few years, this will particularly concern the establishment of an outpatient clinic that combines research, teaching and practice, with a focus on clinical psychology and diagnostics.

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 2020. However, to further specify the aforementioned general objectives of the Faculty, the next few years will be characterised by basic and application-oriented research endeavours with the goal of obtaining scientific insights into the following broad thematic areas (always with the focus on psychological aspects):

- cognitive, emotional and motivational processes and their biological foundations
- work, society and the economy
- development, education and learning over the life course
- health, strain, coping and social inclusion.

Research activities in these thematic areas will primarily address psychological processes and foundations with respect to individuals and groups in the context of social change. This relates to coping with differences, the effects of demographic change (e.g. due to an ageing society and migration), and the effects of technological change, media and digitalisation on thinking, communication and social behaviour, as well as more generally the psychological aspects of social and political phenomena in an increasingly complex world. In addition, the Faculty has defined specific key research areas within (and sometimes across) the thematic areas listed above, which should particularly serve to enhance the Faculty's visibility.

Psychology of aesthetics

This key research area (which primarily falls within the thematic area of cognitive, emotional and motivational processes and their biological foundations) motivates a research programme that studies the psychological mechanisms of aesthetic experience and behaviour. It is primarily oriented towards aspects of human perception and emotional processing as well as their underlying neuroscientific mechanisms. For this purpose, psychological models of aesthetic experience and behaviour have been developed. These models incorporate approaches from general psychology, cognitive psychology, evolutionary and cultural psychology, and neuroscience, which together provide the conceptual and theoretical framework. The specific nature of aesthetic phenomena is primarily examined with regard to the visual domain. The focus is on aspects such as the difference between aesthetic impressions and other perception phenomena, the social dimension and cerebral physiological foundations of aesthetic experience and behaviour, as well as the relationship between aesthetic experience and resilience, health and

well-being. This includes the study of questions related to the conditions of aesthetic experience and the factors that influence it, basic visual preferences, the influence of media, particularly new media, on aesthetic perception, and the social determinants and consequences of aesthetic experience. It thus covers a broad spectrum of areas (art, images, patterns, music, architecture, design, film, the body) and fields of application (museum studies, art and beauty in everyday life, impressions of design, the attractiveness of faces). This key research area is characterised by a pronounced cognitive science orientation, interdisciplinary approaches incorporating history, biology, art, neuroscience, as well as strong international cooperation.

Psychology of lifelong learning

In the context of the research programme on the psychology of lifelong learning (LLL), activities in this key research area (which primarily falls within the thematic area of development, education and learning over the lifespan) range from theoretical model building to evidence-based transfer with regard to third-mission goals. The research programme thus has a three-tiered agenda: (1) The complex web of associations among the core determinants of LLL – motivation and self-regulation – will be analysed in detail, and existing models will be systemically integrated and expanded. This also includes taking into account and modelling the requirements of developmental psychology that are relevant for certain target groups (e.g. immigrants) and age groups (from infancy to older adulthood), as well as numerous other aspects of diversity (e.g. gender). (2) The next step for the programme is to develop innovative measurement instruments in accordance with the developed models (e.g. using new media in an interdisciplinary cooperation with computer science) and to assess their quality criteria. (3) The third subgoal of the research programme is to develop intervention measures to promote the determinants of LLL, to test them in pilot studies and to draw up implementation plans as well as the necessary evaluation measures. The innovative component of the research programme is its systematic integration of theoretical modelling, corresponding measurement approaches, and interventions including implementation plans. This facilitates the establishment of links with other relevant subdisciplines of psychology: educational psychology, developmental psychology, and evaluation and implementation research. In addition, the challenges that learners will face in the future (e.g. digitalisation and Industry 4.0) will be explicitly addressed.



Psychology of changes and decisions in organisations and in the economy

This key research area (which primarily falls within the thematic area of work, society and the economy) studies how people respond to the challenges they are facing in economic contexts today. It particularly focuses on changes in organisations and in the world of work, including the acceleration of work, decisions regarding work processes, the consequences of monitoring and trust with regard to commitment to rules (e.g. tax compliance), the response of humans to the permanent availability of products, and the regulation of one's own consumption patterns. This area also examines differences between countries and cultural influences. Its research is based on theories from work psychology and organisational psychology, economic psychology and social psychology, and contributes to their advancement. In its applied research, quantitative methods predominate. Cross-sectional and longitudinal surveys, observations and diary studies are conducted. Another goal is to prove causal influences in field and laboratory studies. The aforementioned methods are complemented by qualitative approaches such as interviews, focus groups and association techniques, which are used, for instance, to study topics such as

social representations of economic phenomena. In addition, techniques such as eye movement measurement are applied in both field and lab studies in order to directly capture the use of information in the context of decision-making. This key research area examines both aspects of experience (such as emotions) and specific, observable behaviour and decisions.

Psychology of health and impairment

The fourth research area (which primarily falls within the thematic area of health, strain, coping and social inclusion) is oriented towards clinical psychology, and studies questions of health and impairment. Here, the focus is on advancing the understanding of experience and behaviour that is relevant with regard to clinical psychology. In addition to individual human traits, characteristics of people's social environment are taken into account. Specific research questions concern factors and conditions relating to the origin, recovery and preservation of mental health. This is investigated in selected fields such as depression in children and young people, post-traumatic stress reactions, or psychological symptoms in people with developmental intellectual impairments. The future development of this key research area will be carried out in cooperation

with newly appointed professors. Establishing an outpatient clinic that combines research, teaching and practice is a central goal of this key research area.

4.9.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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) [Social Psychology and Consumer Research]
- Biological Psychology [Social, Cognitive and Affective Neuroscience]
- Clinical Psychology of Adulthood
- Developmental Psychology
- General Psychology [Cognitive Psychology]
- General Psychology [Psychology of Aesthetics]
- Psychological Research Methods – Research Synthesis
- Psychology [Bildung Psychology and Evaluation]
- Psychology [Economic Psychology]
- Psychology [Psychological Research on Education and Transfer]
- Work Psychology [Work and Organisational Psychology]

4.9.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Methods of Psychology

Appointments of professorships in line with the research profile and with the need to teach fundamental subjects

Subject dedication of professorship:
Clinical Psychology of Childhood and Youth
Time of appointment: funding via a vacant professorship at the Faculty (presumably as of 2018)

Subject dedication of professorship:
Educational Psychology and Societal Changes
Time of appointment: following vacancy of the Professorship of Psychology (presumably as of 1 October 2019)

Subject dedication of professorship:
Social Psychology in the Context of Work, Society and Economy
Time of appointment: following vacancy of the Professorship of Psychology (presumably as of 1 October 2020)

Subject dedication of professorship:
Health Psychology
Time of appointment: funding via vacant academic positions at the Faculty (presumably as of 1 October 2019)

Future professorships subject to availability of funds

Subject dedication of professorship:
Psychology of Motivation

Subject dedication of professorship:
Family Psychology

Subject dedication of professorship:
Cognitive Neuroscience

Subject dedication of professorship:
Psychology of Ageing

Subject dedication of professorship:
Urban and Environmental Psychology

4.10 Faculty of Social Sciences

4.10.1 Objectives

The Faculty of Social Sciences regards the critical, academically sound analysis of societal challenges and processes of change at global, national and local levels as its key task. Many contemporary societies are undergoing radical change, encountering a variety of limitations. Values and forms of living are diversifying, structures are transforming, roles are redefined and redistributed, and well-established orders are being questioned. This raises questions of distributive justice and of exclusion at many different levels. More than ever before, the social sciences are expected to contribute to a better understanding of these complex processes of transformation, but also 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 fields of action and thus to make a significant contribution to the development of social innovations. In doing so, the Faculty assumes its societal responsibility as a university institution.

Research at the Faculty follows a theory-driven empirical approach, 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, we pay specific attention to the Austrian situation in European and global contexts. As research on societal change increasingly cuts across boundaries of traditional disciplines, the Faculty of Social Sciences aims at close links between, and cooperation with, its different disciplines in research and teaching, the expansion of interdisciplinary collaboration with other faculties of the University, as well as cooperation with institutions outside the university structure, and the internationalisation of research and teaching. The Faculty promotes this development through respective incentives and support structures, particularly for early-stage researchers, and through 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 six 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 further enhancement of established strengths and research traditions, and allows for the development of future-oriented innovative research topics.

Social and cultural anthropology studies the 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 developments. 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 an analysis of current social challenges and developments in Austria and Europe. Research is oriented towards current social problems, has a strong empirical orientation and is closely related to contexts of application. It is integrated into the international discourse and develops sociological theories on the basis of relevant social diagnoses. The current focuses are (1) work, organisation and gender relations; (2) family, generations and life course; (3) migration, cities and social inequality; as well as (4) knowledge, culture and visual worlds.

Political science and government empirically and theoretically address questions of politics and governance, state and democracy and their development and change in different regions of the world. 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 relationships 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); (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 politics) 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 transformation.

Research in the area of communication examines processes of private and public communication through media and technology, and its infrastructural conditions. Analyses focus on the changes in media-based communication methods and topics communicated, as well as the resulting effects on individuals, society, politics and gender relations. The main research topics currently cover the areas of (1) journalism, (2) political communication and media policy, (3) advertising and public relations, (4) media history and media innovation/new media, as well as (5) the development of methods.

In science and technology studies, the focus is on the ever-closer links between scientific, technological and societal change. Analysing these changes is of key relevance today, as scientific and technological innovations are regarded as drivers of the economy and means for overcoming major societal challenges. At the same time, new knowledge and new technologies often give rise to frequently controversial socio-political questions. With regard to research subjects, 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 these different subjects, the role of values and evaluations in science and society, as well as questions of responsibility in research and innovation are addressed. Interdisciplinary cooperation with the corresponding scientific and technological fields is of particular relevance for science and technology studies at the Faculty.

Nursing science addresses questions of nursing as a field of action and covers the whole human lifespan. Analyses include different levels – from individuals to families as well as social and political structures – and the entire chain of care services. In all three thematic areas, namely family-related, oncological and gerontological nursing, the research activities link the views of medicine and of social science on relevant social phenomena. Besides basic research and the 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 reflection on global inequalities from a transdisciplinary perspective, a critical discussion of development cooperation, as well as questions of methodology and methods of development research. This integration

of multiple 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 fields of knowledge and practice and aims at linking theory and practice.

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 use of methods for testing research hypotheses to highlighting their interaction with the formation of theories. 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 social challenges in a collaborative research effort, and to make them available to social stakeholders.

Families, generations and health promotion

Theoretical and empirical research in this area is oriented towards social and socio-political problems that are relevant with regard to families, generations and health promotion. It studies and analyses topics such as demographic challenges, socio-demographic developments, dynamics and changes in the course of life as well as family life, the effects of current social processes on the course of life, families and family lives, health and health promotion, nursing and care services in the context of increasing life expectancy, and the analysis of welfare state interventions.

Regarding subject areas, 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 appropriate working environments and forms of employment with regard to age and health.

Gender and transformation

This key research area provides gender-sensitive theories and analyses with regard to contemporary transformations of society, economy, politics, media and culture. The themes covered include, for instance, affect, 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 the 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 research perspective is of increasing relevance: 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 current questions of changing dispositifs of gender and sex, in which social inequality and exclusion that is produced, for instance, by (gendered) affective and visual technologies, as well as technologies of the body, are key dimensions. Additional analyses study gender policies, which are central to the development of democracy and new forms of political participation, as well as for migration patterns and issues of (non-)belonging. The individual transformation processes of the present are understood as being embedded in global transformation processes and studied from a comparative and a transnational perspective.

Governance, democracy, solidarity

This key research area examines the change of governance in different policy fields, geographical regions and political spaces, as well as the corresponding shifts in the form and function of social order, statehood and democracy. In this

context, national states are regarded as levels of the institutionalisation of democracy and as communities based on mutual solidarity, in which solidarity has been established, for instance, 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 the extent to which 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 from the perspectives of cultural and social anthropology, communication, sociology and political science, taking into account the interactions between these disciplines.

Knowledge societies in turbulent times: science, materialities and public spaces

In many areas of today’s society, questions the beneficial interaction between scientific and technological development on the one hand and societal change on the other play a



significant role. The subjects covered in this key research area range from the complex social 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 disciplines and institutions (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) the restructuring of the production and distribution of knowledge, knowledge infrastructures, and their accessibility; (3) hybridity and new forms of sociality between non-human (e.g. machine) 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 natural sciences and technology are of interest in this key research area.

Migration, citizenship and belonging

The common interest in this key research area is the exploration of the forms and dynamics resulting from migration and integration processes that have changed due to increasing global interdependencies. Another commonality is the understanding that new research perspectives are needed to overcome national and disciplinary, methodological and epistemological restrictions. The fact that different fields of expertise are represented in this key research area results in a diversity of themes and disciplinary affiliations.

The key research area 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. The research themes, studied from an interdisciplinary perspective, include the changing conditions for the building of 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 the struggle for the distribution of resources, rights and belonging, in terms of social participation and marginalisation.

Political competition and communication: democratic representation in changing societies

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 and actors with intrinsic interests, whereas new media represent a pool of opinions and interests, and serve as sources of information as well as means of social communication – with effects of increasing relevance to politics and society.

Visual studies in the social sciences

Visual communication, visual politics, the visualisation of facts and of social relationship are becoming increasingly important. These social developments are referred to as iconic or visual respectively, or as a pictorial turn, and have in some respects already been studied, mainly from the perspective of cultural studies. 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 subjects 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.

4.10.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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 Media Change and Media Innovation
- Communication with a Focus on Public Relations Research
- Comparative Policy Analysis
- 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 and Cultural Anthropology
- Social Stratification Research and Quantitative Methods
- Social Studies of Science
- Sociology
- Sociology of Knowledge and Culture
- Urban Sociology

4.10.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Comparative Politics
- Political Sociology
- Sociocultural Anthropology of the Global South

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

Subject dedication of professorship:
Social and Cultural Anthropology with an Emphasis on Religions and Religious Movements

Time of appointment: following vacancy of the Professorship of Social and Cultural Anthropology (presumably as of 1 October 2019)

Subject dedication of professorship:
Communication with a Focus on Media Entertainment Research

Time of appointment: following vacancy of the Professorship of Communication (presumably as of 1 February 2021)

Subject dedication of professorship:
Comparative Political Institutions

Time of appointment: following vacancy of the Professorship of Democratic Governance (presumably as of 1 October 2022)

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:
Sociology

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

Future professorships subject to availability of funds

Subject dedication of professorship:
Technosciences, Materiality and Digital Cultures

Subject dedication of professorship:
Medical Anthropology and Global Health

(the aim is to cooperate on projects with relevant departments of the Medical University of Vienna)

Subject dedication of professorship:
Gerontological Nursing

Subject dedication of professorship:
Computational Communication Science

Subject dedication of professorship:
International Development

4.11 Faculty of Mathematics

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 Vienna University of Technology, the Medical University of Vienna, the Austrian Academy of Sciences (ÖAW) and the Wolfgang Pauli Institute (WPI). 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.

4.11.2 Thematic Areas and Key Research Areas

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-specific 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 area of logic follows the tradition of Kurt Gödel, who between 1929 and 1931 proved the completeness and incompleteness theorems in Vienna, one of the most significant achievements of mathematical logic in the modern era. The four central fields of modern logic, namely set theory, model theory, computability theory, and proof theory, directly derive from Gödel's work. All four fields are subjects of investigation in this key research area. As a foundation of mathematics, set theory allows to search for the correct axioms that are sufficient for solving all significant mathematical problems, as well as for the fine analysis of classification problems in mathematics (descriptive set theory). Set theory has many strong links with analysis, ergodic theory, and topology. Model theory, as the logic of structures, has numerous important applications in algebra and number theory. Research in the areas of computability theory and proof theory is closely connected with complexity theory. This area, with its “P=NP” problem, is at the core of the foundations of computer science. In addition, mathematical logic has a strong influence on a wide range of subjects in the philosophy of mathematics. At present, this key research area is organised in form of the “Kurt Gödel Research Center for Mathematical Logic” as part of the Faculty of Mathematics.

Biomathematics and dynamical systems

This key research area combines fields of mathematics with a strong tradition in Vienna, namely the 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 issues that originate from the life sciences, in particular from evolutionary research, ecology, population genetics, evolutionary game theory and molecular cell biology. The theory of dynamical systems forms the basis of the mathematical description of biological processes. In addition, methods of partial differential equations, of stochastics and statistics, 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 has always been 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; for example, methods of functional analysis and the theory of differential equations, which are applied to questions of complex analysis, differential geometry, and mathematical physics. These methods also es-

tablish 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 topological quantum field theory naturally connect to the key research area of arithmetic, algebra and discrete mathematics. Apart from the research directly devoted to mathematical physics, many of the geometric topics studied by the members of this research area have strong connections 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 Riemannian geometry and geometrical analysis (e.g. minimal surfaces and constant mean curvature surfaces), 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.

The central areas in the field of mathematical physics include conformal and topological quantum field theory, mathematical aspects of quantum mechanics and of wave phenomena. Particular importance is attributed 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.

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. The main applications relate to the fields of astrophysics, cell biology, continuum mechanics, electrodynamics, nonlinear materials, quantum physics, and semiconductor technology. Moreover, differential equation models are used for developing new imaging methods in medicine as well as for modelling of problems arising in social and economic sciences.

The group specialising in computational optimisation works on mathematical modelling and optimisation (especially global and non-smooth optimisation), with applications in the fields of discrete geometry, statistical data analysis, image processing, and machine learning. The mathematical methodology includes the study of monotone inclusions and of nonsmooth convex and nonconvex optimisation problems.

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 focus is on time-frequency methods and applications in signal processing, wireless communications, and the analysis of biomedical data.

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 inspired by mathematical physics.

In algebraic geometry, two directions are pursued: on the one hand, questions of the so-called mirror symmetry of mathematical physics, as well as the corresponding categorical interpretations and extensions; and on the other hand, 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 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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
- Algebraic Geometry/Differential Geometry
- Applied Mathematics and Modelling
- Applied Mathematics with an Emphasis on Optimisation
- Biomathematics
- Combinatorics
- Complex Analysis
- Computational Science – Mathematical Modelling and Algorithmics in Application Areas (joint appointment: 50 %; 50 % at the Faculty of Computer Science)
- Computer-Oriented Mathematics
- Differential Equations
- Discrete Mathematics with Special Emphasis on Combinatorics
- Dynamical Systems
- Financial Mathematics
- Global Analysis/Differential Geometry
- Harmonic Analysis
- Mathematical Logic
- Mathematical Logic with Special Emphasis on Fundamentals of Theoretical Computer Science
- Mathematics
- Mathematics
- Mathematics
- Mathematics and Biology (80 %; 20 % at the Centre for Molecular Biology)
- Mathematics VI – Applied Analysis, Mathematical Physics
- 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
- Stochastics

4.11.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Algebra and Number Theory
- Financial Mathematics
- Stochastics

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

Subject dedication of professorship:
Mathematical Logic Taking into Account the Foundations of Computer Science

Time of appointment: following vacancy of the Professorship of Mathematical Logic with Special Emphasis on Fundamentals of Theoretical Computer Science (presumably as of 1 October 2018)

Subject dedication of professorship:
Dynamical Systems in Biomathematics

Time of appointment: following vacancy of the Professorship of Biomathematics (presumably as of 1 October 2021)

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)

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:
Harmonic Analysis and its Applications

Time of appointment: following vacancy of the Professorship of Harmonic Analysis (presumably as of 1 October 2024)

Future professorships subject to availability of funds

Subject dedication of professorship:
Quantum Algorithms
(joint appointment with the Faculty of Physics)

Subject dedication of professorship:
Data Science in Astrophysics
(joint appointment with the Faculty of Earth Sciences, Geography and Astronomy)

Subject dedication of professorship:
Machine Learning
(joint appointment with the Faculty of Computer Science)

Subject dedication of professorship:
Quantitative Modelling of Cellular Networks
(joint appointment with the Centre for Molecular Biology)

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

Subject dedication of professorship:
Algebraic Topology

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 on 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 computational aspects of the sciences involved.

Students in the bachelor's programmes at the Faculty of Physics have access to comprehensive, profound education that encourages independent thinking and acting, and also enables a change to other areas 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 enable graduates to be excellently positioned in international research or private business. Great importance is also attached to the quality of physics as a teaching subject.

4.12.2 Key Research Areas

The key research areas at the Faculty have proven their worth as an opportunity of structuring research and teaching within the Faculty; they are based on its members' research initiatives.

Quantum optics, quantum nanophysics and quantum information

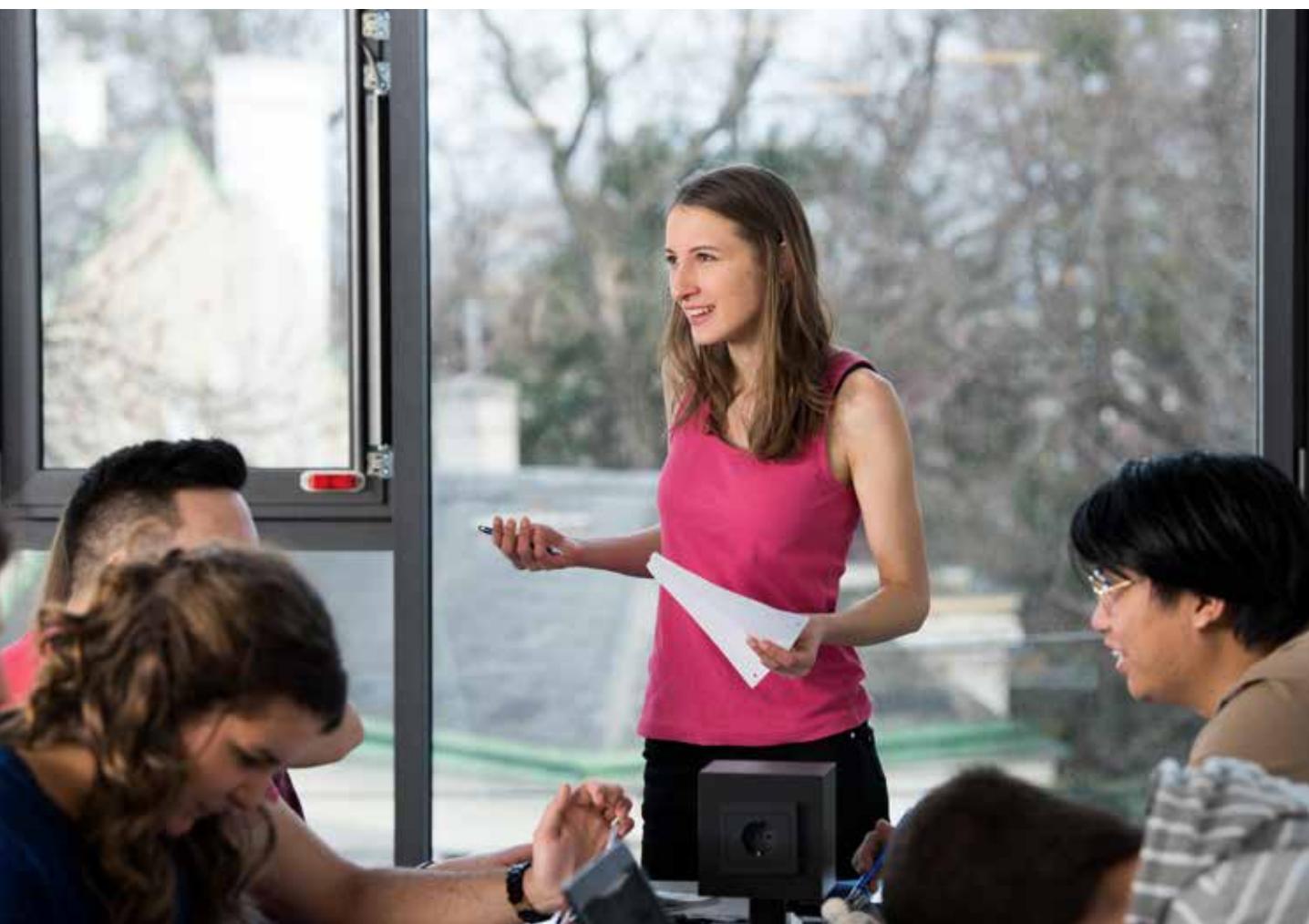
This key research area investigates the foundations of quantum physics, as well as its technological applications. Its experimental activities focus on preparing, controlling and detecting individual quantum objects and quantum-correlated ensembles of photons, atoms, complex molecules, nanoparticles 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 (VSQ), as well as the Quantum Technology Flagship Programme recently started by the EU, and the Erwin Schrödinger Center for Quantum Science and Technology (ESQ). In addition, international cooperation in the context of research programmes and industrial partnerships is also worthy of mention.

Computational physics

The key research area of computational physics combines the development of new computational methods 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, which are integrated into the globally licensed Vienna Ab Initio Simulation Package (VASP) code for the calculation of solids, as well as on improved statistical methods and coarse-graining methods for bridging length and timescales. The materials studied include classical atomic, molecular and colloidal solids, nanostructures, as well as liquids, biological systems and soft matter. Numerous forms of international collaboration have been established, in addition to research programmes, as well as industrial cooperation in the area of novel materials and microfluidics.

Particle physics, gravitational physics and mathematical physics

This key research area 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. The focus is on theoretical models in order to enable high-precision predictions for collider experiments such as the Large Hadron Collider, the study of elementary particles such as the Higgs boson, dark matter, neutrinos and heavy quarks. 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.

Complex nanoscale matter

The focus of this key research area is on the physical foundations of novel low-dimensional materials as well as their hierarchical and hybrid structures. These advanced materials are the basis for future innovative technologies, which, for instance, are important for sensor technology, nano- and opto-electronics, as well as biotechnology. One- and two-dimensional materials display numerous novel phenomena and quantisation effects, which originate from confined geometries or reduced spatial dimensionality. Eventually, the macroscopic properties of materials are also changed significantly. For their production, investigation and modification, state-of-the-art methods are continually applied and advanced, for instance, microscopic and spectroscopic procedures as well as charge transport and scattering experiments. In this context, quantum correlations are determined by means of experiments, and atomic structures are analysed in detail and modified in a targeted manner. Research into bio and hybrid materials includes the examination of hierarchical structures on different length scales and analysis by means of complementary spectroscopy. The overarching goal here is to produce and functionalise such advanced materials with structural, electronic, optical and transport properties that are tailored to specific requirements.

A large network of national and international partners that cooperate in research programmes, as well as industrial partners, enables the implementation of application-oriented projects in addition to intensive basic research.

Physics and the environment

This key research area 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 time-scales, 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 measurement in the entire aerosol-size range, as well as in the measuring 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 social questions 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 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Aerosol and Cluster Physics
- Aerosol and Cluster Physics
- Computational Physics
- Computational Quantum Mechanics
- Didactics of Physics (cooperation with the Centre for Teacher Education)
- Experimental Quantum Optics
- Gravitational Physics
- Hybrid Systems and Complex Materials
- Isotope Physics
- Materials Physics
- Mathematical Physics
- Multi-Scale Computational Physics
- Particle Physics and Particle Astrophysics
- Quanta and Solids
- Quantum Foundations and Quantum Information Theory; section 99, para. 3 of the Universities Act (temporary: for six years)
- Quantum Information on the Nanoscale
- Quantum Materials Modelling
- Quantum Nanophysics
- Theory of Quantum Optics and Quantum Information

4.12.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Experimental Quantum Physics
- Low-Dimensional Transport and Nanotechnology
- Quantum Information Science and Technology

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

Subject dedication of professorship:

Experimental Soft Matter Physics

Time of appointment: funding via a vacant professorship at the Faculty (presumably as of 2018)

Subject dedication of professorship:

Theoretical Physics

Time of appointment: following vacancy of the Professorship of Gravitational Physics (presumably as of 1 October 2024)

Subject dedication of professorship:

Physics and the Environment

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:

Metrology

Subject dedication of professorship:

Quantum Algorithms

(joint appointment with the Faculty of Mathematics)

Subject dedication of professorship:

Computational Material Discovery

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 science 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 put on the key research areas of (1) computational chemistry and biomolecular simulation, (2) functional and sustainable materials chemistry, (3) food chemistry and physiological chemistry, (4) bioanalysis and environmental analysis, (5) synthesis and catalysis and (6) biological and medicinal chemistry, as well as on comprehensive education in chemistry. Beyond that, chemistry is the prerequisite for a profound understanding of other disciplines in 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 Vienna University of Technology (degree programme in Technical Chemistry): At the University of Vienna, the curricula at all levels are, both theoretically and practically, more strongly oriented towards the scientific basis and methods, as well as towards 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 Vienna University of Technology 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 the Vienna University of Technology, 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 is 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. The scientific alignment between the University of Vienna, the Vienna University of Technology, the University of Natural Resources and Life Sciences, Vienna and the Medical University of Vienna offers a significant potential for joint developments.

The Chemistry Meets Microbiology research network enables interdisciplinary cooperation in which 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 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 X-Ray Structure Analysis Centre, the NMR Centre, as well as the inter-faculty Centre for Nanos-structure Research, which is jointly run by the Faculties of Chemistry and of Physics.

4.13.2 Thematic Areas and Key Research Areas

The Faculty of Chemistry continues to address new topics that can lead to new key research areas. This includes, for instance, the newly emerging areas 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 been taken up by the sciences with a biological orientation, and permits numerous new insights with regard to the functionality of biomolecules, their interactions both at the internal level and with their environments, as well as their synthesis. The questions to which they give rise are highly complex and require high-performance analysis. The Faculty of Chemistry has an excellent international reputation in this field, which is based on many decades of successful research with regard to full and rapid analysis.

One focus is on the combination of separation procedures and ultra-high sensitivity methods of analysis for determining (increasingly often by mass spectrometry) as many different components per single sample as possible. This permits the specific screening of cell systems to explore functional relationships, and requires both the further development of the corresponding instruments and new methods in bioinformatics. This enables the identification and, consequently, the exact quantification of, for instance, proteins, peptides, and potential marker molecules. New methods have thus been established in bioanalysis and environmental analysis, in order to examine not only chemical processes in the environment, but also the biological impact of chemical substances. In this way, new criteria for assessing the environmental and biological relevance of materials can be made available. This is complemented by the development of methods of rapid analysis and sensor systems for analytical questions of a smaller scope.

Biological and medicinal chemistry

This research area comprises the synthesis and isolation of complex natural products and active ingredients, as well as structure/function studies on biomolecules, from small molecules to various biopolymers, whose functional properties are examined in organic, inorganic, biophysical, analytical and biological chemistry.

Important classes of compounds are based on low-molecular metal coordination compounds that can possibly be used for cancer treatment, and have already been developed as far as the stage of clinical trial on patients. Combined with various ways of tumour targeting and state-of-the-art analysis of distribution in tissues, innovative cancer treatment strategies are being developed in close cooperation with the Medical University of Vienna.

New methods for the selective chemical modelling and synthesis of peptides and proteins permit the investigation of biologically relevant modified proteins that cannot be accessed

in other ways. This is relevant for the analysis of disease-related processes in the areas of 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 antibodies, for finding improved vaccines and for improving the absorption of therapeutics.

Amino acid precursors and components with new isotopic labelling patterns and post-translational modifications are generated for the synthesis of proteins, for the specific modification of target proteins and to permit structure/function studies. Structure studies on proteins by means of NMR and crystallography are used to understand the functions of different proteins in atomic resolution. Here, metalloproteins are of particular interest. Developing improved conditions for crystallisation by using polyoxo-metalates as crystallisation additives constitutes a particular link between biological and inorganic chemistry. The synthesis of bioactive hydrocarbons and of compounds interacting with DNA and RNA opens up additional areas in the fields of biological and medicinal chemistry.

Functional and sustainable materials chemistry

Functional materials are an essential basis of our modern industrial society, with regard to central areas such as energy, environment, mobility, information technology and medicine. The Faculty of Chemistry therefore practices basic and applied research on materials for new, ecologically friendly technologies, on polymers and composites, on metallic, semiconductor, ceramic, thermoelectric and hybrid materials, as well as on catalysts. Special importance is attributed to the production and characterisation of functional structures at the nano and micro levels, and 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 synthesising strategies (bottom-up and top-down, catalysed and non-catalysed) and characterisation methods are applied.

In addition to the aspect of basic research into physical and chemical properties of materials, their potential application is a strong driver of the Faculty's research activities, which include many of the areas mentioned above, and thus range from innovative and renewable materials to catalysis and molecular identification in diagnostics. Consequently, myriad interrelations with the other key research areas of the Faculty are apparent.

Computational chemistry and biomolecular simulation

Theoretical chemistry contributes to the characterisation of material properties in the fields of biological chemistry and materials chemistry, and also helps to gain insight into the photochemistry of organic and inorganic molecules. In order to obtain a better understanding for the structures, spectroscopic data and reactivity of molecules, quantum chemical program packages are applied. The use of high-precision methods to calculate electron 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.

Biomolecular simulation studies the structure, dynamics and energetics of biopolymers, explicitly taking into account solvation by conventional and innovative solvents, such as ionic liquids, with the goal of analysing the structure and dynamics of both individual biomolecules and their solvation, as well as of protein-ligand and protein-protein interactions. These are connected with experimental methods through free-energy calculations and computational spectroscopy of nuclear motion.

Modelling the structures of biopolymers and their functions in cellular networks is another focus of research. In particular, predictions of secondary and tertiary structures of RNA molecules are carried out using modern high-throughput data. Methods for designing functional RNA molecules are developed and used in order to analyse and manipulate (bio-)chemical reaction networks. The development of new algorithms profits from the close cooperation 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 exploring components that correspond to molecular mechanisms, as well as their relevance with regard to food safety. In Austria, the Faculty of Chemistry is the only location where a combined expertise in food chemistry and food toxicology is available. In the field of food chemistry, in particular regarding food safety and toxicological evaluation, new synergies may develop – for instance with the Vienna University of Technology, the University of Natural Resources and Life Sciences, Vienna and the Medical University of Vienna. This particularly applies to the re-



search area of food chemistry in the field of the interference of food and food ingredients with chemotherapeutics, mycotoxin research as well as the topical field of nanotoxicology.

With respect to food safety, cellular mechanisms of action of various ingredients (bioactive components, contaminants, nanoparticles) in the human digestive system are researched, using a range of biochemical, molecular-biological, toxicological and analytical techniques.

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 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 used.

The applied techniques record the bioavailability of the target compounds and their bioactivities at the gene-regulatory (DNA and RNA expression) and protein-regulatory levels, and their impacts on the metabolic profile.

The research activities in the areas of food chemistry, food toxicology and physiological chemistry enable perfect cooperative links within the Faculty of Chemistry and with the Faculty of Life Sciences (nutritional sciences, pharmacy, microbiology), the Faculty of Earth Sciences, Geography and Astronomy, as well as the Faculty of Physics. This is reflected in the active part that the Faculty plays in the Chemistry Meets Microbiology research network. Likewise worthy of mention is the cooperation with the Vienna University of Technology, the University of Natural Resources and Life Sciences, Vienna/ IFA-Tulln, the Medical University of Vienna and private business partners.

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 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 includes the development of new methods, customised chemical transformations, as well as the efficient optimisation of existing chemical processes.

Specific importance is attached to the synthesis, modification and structural analysis of natural products such as hydrocarbons, macrolides, peptides and proteins, which permits applications of social relevance in industry, the life sciences and medicine. 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 improved ways 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 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Analytical Chemistry
- Biochemical Modelling (joint appointment: 50 %; 50 % at the Faculty of Computer Science)
- Biofunctionality of Food
- Biological Chemistry
- Biophysical Chemistry
- Chemical Catalysis
- Computational Chemistry – Theoretical Chemistry/Scientific Computing
- Computational Structural Biology
- Didactics of Chemistry (cooperation with the Centre for Teacher Education)
- Environmental Chemistry
- Food Chemistry
- Inorganic Chemistry
- Inorganic Chemistry II
- 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 2017

- Physical Chemistry

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

Subject dedication of professorship:

Organic Chemistry

Time of appointment: following vacancy of the Professorship of Organic Chemistry (presumably as of 1 October 2022)

Subject dedication of professorship:

Inorganic Chemistry

Time of appointment: following vacancy of the Professorship of Inorganic Chemistry (presumably as of 1 October 2024)

Future professorships subject to availability of funds

Subject dedication of professorship:

Innovative Dynamic Spectroscopic Techniques

Subject dedication of professorship:

Chemical Bioinformatics Network Analysis

Subject dedication of professorship:

Emerging Pollutants

Subject dedication of professorship:

Green Chemistry

Subject dedication of professorship:

Microbial Biochemistry

4.14 Faculty of Earth Sciences, Geography and Astronomy

4.14.1 Objectives

The goal of the Faculty is to understand the cosmos, Earth, the environment and the anthroposphere to ensure the sustainability of our planet. The spirit of the Faculty is one of exploration: The Faculty wants to know how the universe generates planets like Earth, how Earth works, how the environment is created on the surface of the planet, and how it affects and is affected by humankind.

In this regard, the Faculty of Earth Sciences, Geography and Astronomy focuses on fundamental questions of human existence. How did the universe come about? Where does Earth come from and are there other, similar planets? How has Earth evolved to its present state and can its future be predicted? How was life able to develop on our planet, and how has it evolved? 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 Nation's Sustainable Development Goals: environmental change, environmental pollution, a changing climate, water resources, biodiversity, migration and population dynamics, the sustainable use of resources and the resilience of natural systems. The Faculty investigates and teaches these subjects at an interdisciplinary level, using well-established methods of natural and social sciences.

As a community of scientists studying the sustainability of 'Spaceship Earth', the Faculty needs to have a broad basis. It is a place where natural sciences and social sciences meet. Its disciplines range from those primarily based in physics, such as galaxy formation and evolution, star formation, stellar evolution, exoplanets, meteorology, geophysics, to geoscientific disciplines such as environmental, bio and isotope geochemistry, geodynamics, hydrogeology, impact research, mineralogy, nanogeosciences, palaeontology, palaeobiology, petrology, sedimentology, environmental pollutants research, and the disciplines of physical geography and regional, human, economic and social geography, didactics of geography and economics, cartography and geoinformation science.

The Faculty pursues research at a high level to ensure that its disciplines enjoy a leading position and high visibility in Europe and beyond. The Faculty is involved in top-level international cooperation and participates actively in major international programmes such as the Europe-

an Southern Observatory (ESO), the European Space Agency (ESA), the Copernicus European Earth Observation Programme, research on synchrotron particle accelerators, the International Continental Scientific Drilling Program (ICDP), and the Long-Term Ecological Research (LTER) network. In addition to international cooperation, the Faculty attaches great importance to cooperation within Austria, in and around Vienna, with institutions such as the Geological Survey of Austria, the ZAMG meteorology and geodynamics centre, the Natural History Museum Vienna, as well as within the University of Vienna. Synergy at the national level is oriented towards teaching and research, as well as towards establishing and efficiently using high-cost infrastructure.

The Faculty aims at a high visibility of its research via publications in top journals and the successful acquisition of third-party funds. It follows open-access best practices and is committed to making the results of its research visible and accessible to the general public via the 'Faculty for Exploration' initiative. Because of its intrinsic diversity, expertise from many different disciplines is brought together in a natural way, which sets the stage for innovative and interdisciplinary research to thrive.

Ensuring a high level of training for its students is an equally important goal at the Faculty. The Faculty places great emphasis on a form of teaching that acknowledges students and integrates them into research, encourages critical thinking, and generates opportunities for them to pursue academic careers. Good employability of young graduates is regarded as a yardstick of success in this context. The Faculty provides international master's programmes and an array of exciting and timely subjects for doctoral theses, and offers many courses in English to prepare students for the global job market. The Faculty is characterised by a high level of internationalisation in its research projects and its recruitment of staff, and encourages mobility among its students and teachers.

Furthermore the Faculty aims to provide attractive conditions for female and early-stage researchers. For this purpose, several innovative programmes have been, and are being, developed.

4.14.2 Key Research Areas

The scientists of the Faculty are grouped in four key research areas: cosmos, Earth, environment, and anthroposphere. These key research areas overlap extensively and feed the Faculty's mission, namely understanding the cosmos and society to ensure the sustainability of our planet. Per se, these research areas go beyond this Faculty, and are jointly addressed together with other faculties in order to define a wide range of overlapping themes in accordance with the Faculty's mission.



Cosmos

The aim of this key research area is to understand the origin and evolution of stars, galaxies, and planets like Earth. Making use of state-of-the-art observational facilities across the world and in space, as well as high-performance computers, this research area quantifies the physical and chemical processes involved in the transformation of 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 relevant physical parameters and conditions such as the size, shape, composition, and dynamics of galaxies, stars, gas and cosmic dust are measured and derived from the observation of light across the entire electromagnetic spectrum. For this purpose, the Faculty uses the large telescopes of the European Southern Observatory (ESO) and high-performance ESA and NASA satellites, as well as UniBRITE, Austria's first satellite. The links between empirical results and modelling, and especially the chronological sequences of cosmological and astrophysical processes, are studied by means of numerical simulations on high-performance computers – for instance, at the Vienna Scientific Cluster.

The combination of observation, theory, numerical simulations, data visualisation, and instrumentation forms the basis for obtaining fundamental insights into key processes in the universe, including the origin of our planet, its relation to the solar system and the Milky Way, and conditions for life.

Earth

The aim of this key research area is to gain a deeper understanding of how planet Earth works. The focus is on examining the causes and evolution of the Earth's structure and dynamics in time and space, identifying long- and short-term processes that have shaped the planet, exploring connections with biological processes, and, in collaboration with the Faculty of Life Sciences, tracing the evolutionary history of ecosystems and organisms.

Insight into the processes controlling Earth's evolution is obtained by integrating the snapshot of the present-day Earth in the solar system and inferring the geological evolution of our planet. Earth contains a diverse set of geological features originating from processes that are constantly changing and influencing the conditions on Earth's surface. Processes like orogeny, volcanism, metamorphism, meteorite impacts, and erosion take place in Earth's interior and on its surface over geological time spans, and have long-term effects on the formation of

geomaterials, as well as on the evolution and diversity of life.

The methods used in this key research area are very diverse and comprise geophysical techniques, remote sensing, geological mapping and visualisation, data modelling and structuring, radiometric dating, quantification of pressure, temperature and deformation conditions of rocks as well as their rates of change, the study of material behaviour under crustal and mantle conditions, geochemical analyses including physical and chemical properties of natural and synthetic materials, advanced electron beam techniques, numerical modelling of geodynamic processes, and examination of (micro)structure and texture formation. Industrial applications naturally arise in the field of ore deposits and fossil fuels. These focus on the formation and recovery of oil and gas, as well as on the development and design of new mineral-based materials, such as construction materials, refractory products, or functional ceramics.

Environment

This key research area aims to achieve a better understanding of environmental processes in order to improve the surveying and forecasting of the dynamics of surface processes in the complex coupled human-environment system. It tackles questions of the sustainable preservation of the basis of life.

Earth and its atmosphere are subject to changes that have influenced the planet's natural environment in the past and present, and will continue to do so in the future, with a direct impact on society. Identifying those environmental factors that have brought about change, both natural and human-made, enables conclusions with regard to recent systems and provides a basis for predicting future developments. This key research area thus also aims to quantify the impact of social activity on the environment as well as to characterise hazards and risks.

Process-oriented research approaches in this area seek to identify the interrelationships between humans, the atmosphere, the biosphere, the hydrosphere and the upper geosphere. Ecosystems and society are, to a large extent, influenced by environmental processes: In order to understand these complex relationships, components of these systems and their interactions are analysed, modelled and studied. This key research area provides valuable insight into meteorological processes, the climate system and palaeo-climate reconstruction, as well as the socio-economic effects of global change on regional development, including interactions with societal processes. It includes research on the use of land and resources, and ecosystem management, groundwater and surface water,

environmental and emerging trace contaminants, natural hazards as well as risk research. These processes are investigated by means of comprehensive in-situ high-resolution measurements in space and time, cutting-edge laboratory analysis, remote sensing, as well as modern high-performance numerical modelling at various degrees of temporal and spatial resolution. The results obtained can then be structured in geo-databases and visualised dynamically.

Anthroposphere

The aim of this key research area is to understand how human activity has taken place in space and time, how it shapes our planet's environment, and is at the same time affected by it. The ongoing global transformations both in societies and in economic orders result in dynamically changing spatial patterns at various levels (local-global, north-south, urban-rural). They are driven by rapid social, economic, demographic, technological and ecological changes. This key research area seeks to understand the socio-spatial dimension of these changes – such as population dynamics, migration flows or economic restructuring, and assess their socio-economic and ecological implications.

This key research area focuses on urbanisation dynamics, as urban areas play a pivotal role in transformation processes. Its research activities address issues such as migration and integration, urban disparities and gentrification, as well as cities as risk areas and as centres for new development pathways such as the green economy. Urban areas are analysed in their relation to rural areas, which includes the study of topics such as the provision of public services, environmental conservation, as well as the mobilisation of endogenous development potentials and the consolidation of exogenous development stimuli.

This key research area conducts empirically-based and theory-driven research on socio-spatial processes, problems and conflicts. One focus is on the transfer of research results to geography and economics education in schools. The overarching goal is to help provide a scientific foundation to enable a reflective social examination of complex socio-spatial processes and informed planning decisions aimed at sustainability transitions.

4.14.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Applied Geography, Spatial Research and Spatial Planning
- Astronomy, Satellite Astronomy and Experimental Astronomy
- Economic Geography
- Environmental Geosciences and Applied Sedimentary Petrology
- Galaxy Formation in the Early Universe
- Geodynamics and General Geology
- Geoecology
- Geography and Cartography
- Geophysics
- Impact Research and Planetary Geology
- Isotope Chemistry and Biogeochemistry
- Mineralogy and Crystallography
- Mineralogy and Spectroscopy
- Palaeobiology with Special Emphasis on Vertebrate Palaeontology
- Palaeoecosystems
- Palaeontology
- Physical Geography
- Population Geography and Demography
- Stellar Astrophysics
- Theoretical and Experimental Petrology

4.14.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- General Meteorology
- Sedimentology
- Theoretical Extragalactic Astrophysics

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

Subject dedication of professorship:

Theoretical Meteorology

Time of appointment: funding via a vacant professorship at the Faculty (presumably as of 2018)

Subject dedication of professorship:

Environmental Geophysics

Time of appointment: funding via vacant academic positions at the Faculty

Subject dedication of professorship:

Cartography and Geoinformation Science

Time of appointment: following vacancy of the Professorship of Geography and Cartography (presumably as of 1 October 2020)

Subject dedication of professorship:

Spatial Research and Spatial Planning

Time of appointment: following vacancy of the Professorship of Applied Geography, Spatial Research and Spatial Planning (presumably as of 1 October 2020)

Future professorships subject to availability of funds

Subject dedication of professorship:

Climate Science

Subject dedication of professorship:

Computational Environmental Geochemistry and Pollutant Dynamics

Subject dedication of professorship:

Data Science in Astrophysics

(joint appointment with the Faculty of Mathematics)

Subject dedication of professorship:

Didactics of Geography and Economics

(cooperation with the Centre for Teacher Education with regard to advertising and recruitment)

Subject dedication of professorship:

Geobiology

(joint appointment with the Faculty of Life Sciences)

Subject dedication of professorship:

Planetary Geology

Subject dedication of professorship:

Urban Studies

4.15 Faculty of Life Sciences

4.15.1 Objectives

The Faculty of Life Sciences encompasses the disciplines of biology, pharmacy and nutritional sciences.

The Faculty aims at acquiring a deep understanding of the principles of life and evolution. On the basis of this knowledge, it addresses the multifaceted challenges of the future, such as aspects of environmental change, nutrition and health of an ageing human population.

Living organisms are embedded in complex networks with other organisms in a continuously changing environment. The thorough understanding of the evolution, the diversity and maintenance of biological systems increasingly requires systems biological approaches which enable the generation of big data sets, as well as their computational and functional analysis. Hence curiosity-driven fundamental research provides the basis for society-driven applied science to advance basic knowledge of biological systems and consequently find solutions to societal challenges and problems.

The goals of the Faculty of Life Sciences are to further stimulate interdisciplinary research among the individual departments of the Faculty and to further enhance the interdepartmental use of the research equipment and instrumentation that is available now and will be acquired in the future. The Faculty encourages interdisciplinary research within the Faculty and between faculties to address major contemporary research challenges in life sciences. The Faculty aims at intensifying its collaboration with other national and international research institutions to further strengthen its position in life sciences at the national level and in the international research arena. The planned relocation of a large part of the Faculty to the vicinity of the Vienna Biocenter (VBC) will further enhance the synergy and collaborative interactions with groups from the MFPL as well as the non-university research institutes at the VBC (IMP, IMBA, GMI).

Scientific research in many departments is oriented towards the research agenda of the European Research Area and participation in international programmes such as Future Earth, massive sequencing programmes and systems biology projects to attract additional third-party funding from national and international research agencies.

4.15.2 Thematic Areas and Key Research Areas

The research activities of the Faculty of Life Sciences are represented by five thematic areas: botany and biodiversity research, organismal systems biology, functional ecology, nutritional sciences, and pharmacy.

The focus of the thematic area of botany and biodiversity is the study of the evolution of biodiversity, the causes and consequences of its unequal distribution in space and time, and its potential change due to anthropogenic processes (global change). Its research is tightly linked with the key research areas of patterns and processes in plant evolution and ecology, and environmental change biology. The topics addressed and methods employed range from molecular genetic, genomic, structural-morphological and modelling approaches to analyses of selected organismal groups, interaction systems, complex species communities and landscape structures. They include laboratory- and computer-based reconstructions for modelling evolutionary processes and obtaining assessments of species' genetic and eco-evolutionary responses to environmental change. This enables forecasts of future changes in biodiversity patterns. The Botanical Garden core facility as well as the La Gamba tropical field station, with their living plant collections and additional resources, provide key foundations for biodiversity-related research and teaching at the University of Vienna. This involves close cooperation with other departments at the Faculty of Life Sciences. In addition, the Botanical Garden is a competence centre for national and global strategies to preserve biodiversity. It develops, and actively participates in species protection and nature conservation programmes and thus contributes to our knowledge and the preservation of plant diversity. With its postgraduate and advanced training activities, the Botanical Garden also plays a relevant role in society, art and policy matters beyond the university framework.

The aim of the thematic area of organismal systems biology is the pursuit of a better understanding of metazoans as complex systems. In this framework, a broad range of invertebrate and vertebrate species, including human beings, are investigated comparatively at the molecular and cellular, as well as the ecological and social levels. The main effort is to analyse the development and evolution of these organismal systems, using experimental methods, including 3D and 4D imaging and computational analyses to obtain large genomic and tomographic data (sets). The thematic area of organismal systems biology is represented by the key research areas of cognition, neuroscience and behaviour, and the evolution of organismal complexity.

The objective of the thematic area of functional ecology is to gain insight into the structures and functions of limnic, marine and terrestrial ecosystems. The focus is on microbial ecological, biogeochemical ecosystems and systems biological research, as well as on microbial symbioses and model organisms. These research approaches are eminently relevant in environmental science and for society in general, especially regarding the grand challenges of global change and Future Earth. In order to achieve the above goals, state-of-the-art technologies from the fields of systems biology, bioanalytics, biogeochemistry and imaging are being combined. Another focus is on analysing the function of microorganisms in their natural and technical habitats, as well as on the relationships between microbial control and global material flux in aquatic and terrestrial systems. In the future the quantitative aspects of ecology will be advanced to consolidate the predictive character of ecology and its theoretical foundations. The key research areas of environmental change biology, symbioses, and microbial ecology and ecosystems represent the key focuses within this thematic area.

The thematic area of nutritional sciences is aimed at examining biological processes that result from the interrelationships between organisms and their diet. The focus is on molecular nutrition research in a systems biological approach using genomic, transcriptional, proteomic and metabolic strategies. This will contribute to our understanding of the cellular and molecular modes of action of nutrients and non-nutritive food components. This will also support biomarker development to predict long-term diet-related diseases and to identify genetic variants that are involved in the development of diet-related phenotypic expressions. The instrument of systematic analysis helps detecting possible correlations between diet-associated factors and numerous diseases. It is a powerful tool for formulating new research questions. Various aspects of this thematic area are reflected in the key research area of nutrition and ageing.

The thematic area of pharmacy is oriented towards the discovery, development and safe use of new medications, for the benefit of society. The main focus is on the identification and characterisation of new biologically active natural and synthetic substances and their interactions within the human organism at the molecular level. *In silico*, *in vitro*, and *in vivo* models are developed and tested to yield new lead substances and treatment approaches and to develop delivery systems for drugs. Several aspects of this thematic area are represented in the key research areas of drug discovery from nature, computational life sciences, and nutrition and ageing. They are also reflected in the intensive cooperation with the Medical University of Vien-

na, e.g. in the context of joint projects funded by the Austrian Science Fund, collaboration in the area of biomedical imaging, and joint teaching activities in the new master's programme in Drug Discovery and Development.

Evolution of organismal complexity

The goal of this key research area is to understand the mechanisms of evolution and of developmental biology, whose complex interactions bring about the diversity of differentiated cell types, organs and body plans. This area combines high-end molecular, genomic, morphological and biomathematical methods, along with 3D and 4D imaging techniques. The integration of theoretical and experimental approaches to systems biology enables a comprehensive understanding of the evolution of organismal complexity. A great variety of experimental systems are used to comparatively examine gene regulatory networks, the influence of epigenetic regulation and dynamic cellular interactions. For instance, fundamental principles of the development, structure and function of nervous systems and their interaction with the environment are studied.

Cognition, neuroscience and behaviour

The cognitive, neuronal and hormonal basis of behaviour represents the main topics of this key research area. Its strength lies in its broad comparative approach, which integrates a variety of model systems and research topics at different organisational levels, ranging from the cell to social groups. Fundamental issues in this field include the evolution of cognitive processes, the influence of environmental factors on behavioural phenotypes, as well as interactions between behavioural, genetic and physiological factors. Social aspects such as the complexity of social relationships, cooperation, communication and stress management are particularly relevant. One important goal is to strengthen the neurosciences, along with animal behaviour and cognition research within the Faculty. Continuing efforts are being made to foster intensive collaboration between the groups working in this field at the University of Vienna and in Vienna's surroundings. The new NeuroCog initiative will foster the cooperation between different faculties of the University of Vienna and pool the existing expertise coming from other universities and non-university research institutions such as the IMP, IMBA and IST Austria.

Patterns and processes in plant evolution and ecology

This key research area deals with the evolutionary, developmental and ecological processes that have given rise to today's diversity of plant life. Its research focuses on how plant diversi-



ty has developed and changed under natural conditions. Nowadays, the human impact plays a considerable role in this process, which raises the question of how plant diversity can be preserved in the long term. Identifying the underlying processes requires a thorough understanding of the evolutionary ecology of biodiversity, which includes the study of the morphology, phylogenetics and population biology of plants. These multidisciplinary approaches are supported by the infrastructure and collections of living and preserved plants of the Botanical Garden and the La Gamba tropical field station.

Symbioses

Symbiosis, i.e. different organisms living together, is a universal principle of life. This key research area deals with relationships between microbes and protists, animals and plants. A variety of associations are studied, ranging from two-partner symbioses to complex relationships between animals or plants and their manifold microbiomes. The focus of research is on host and symbiont diversity, including the variability and function of the phenotype in ecological and pathological contexts, as well as the molecular and physiological mechanisms of microbe-host interaction, its establishment and maintenance. Finally, reconstructing the evolution of symbiotic relationships is an important part of the current research activities. This includes empirical stud-

ies to test theoretical conceptions in evolution. As many symbioses are associated with bacteria, a close cooperation with researchers of the key research area of microbial ecology and ecosystems is maintained.

Microbial ecology and ecosystems

Microorganisms play a key role in food webs and in all global biogeochemical cycles. Here, the focus of interest is on the structure and function of microbial communities and the resulting matter flux in aquatic, terrestrial and technical ecosystems. In an interdisciplinary approach, priority will be given to those questions that help improve our understanding of functionally important microorganisms. Research on the ecology and evolution of microorganisms is a prerequisite for understanding the functions of microbes in a changing environment and for optimising the use of microbial communities in technical systems. This approach requires state-of-the-art methods from the fields of metabolomics, functional genomics, single-cell microbiology and isotope analysis.

Environmental change biology

The current environmental changes have multiple, and frequently interacting, components. This key research area focuses on climate change and land use change, as well as on

changes in the carbon and nitrogen cycles. It studies biological invasions and environmental pollution and their effects on, and interactions with, biological systems at all levels of organisation from genomes to biomes. This includes interdisciplinary collaboration with biology, the earth sciences, chemistry and physics.

Nutrition and ageing

In an ageing society, gaining a more detailed insight into the molecular mechanisms involved in ageing is an issue of major importance. Nutrition is regarded as one of the driving factors for healthy ageing but the detailed mechanisms and the interactions of nutrients with the ageing processes of cells and whole organisms are not yet fully understood. This key research area thus focuses on selected aspects of the interaction of nutritional and other lifestyle factors with the process of ageing, using human and animal studies as well as in vitro models to explore the mechanisms behind epidemiological observations. The development and refinement of age-specific biomarkers helps to improve our understanding of ageing and keep people healthy as long as possible (healthy and active ageing).

Drug discovery from nature

This key research area is centred on natural substances that, based on their evolutionary optimisation, appear to be particularly suited for interaction with potential targets as key structures for developing medications (privileged structures). The goal of research in this area is to identify new active substances from nature (e.g. plants or microorganisms) and to understand their functional mechanisms, especially at the molecular level. Studies on the interaction between natural substances and anti-targets also help to improve the safety of medicines. The current development is directed towards metabolomics and target fishing in order to characterise the polypharmacological profiles of natural substances. Modern imaging techniques are used to help evaluate the efficacy and safety in relevant disease models.

Computational life sciences

This key research area pools the numerous activities with regard to applying and developing information technologies in the life sciences. In addition to forming topic-specific clusters, another aim is the interdisciplinary establishment of new methods in the fields of pharmacoinformatics, in-silico metabolomics and bioinformatics, as well as in structural and systems biology. Particular emphasis is placed on processing high-throughput biological data, the development of mathematical methods for modelling biological and biomolecular systems,

as well as on the topics of data integration and data mining. This key research area cooperates closely with other faculties, the Centre for Molecular Biology and the Austrian Academy of Sciences. The existing collaboration with the Center for Integrative Bioinformatics Vienna will be intensified once the new biology building is operational.

4.15.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Animal Physiology with Focus on Ornithology (cooperation of the University of Vienna with the University of Veterinary Medicine, Vienna)
- Cognitive Ethology
- Developmental Biology of Animals
- Dietetics and Food Quality
- Ecogenetics
- Ecophysiology of Microorganisms
- Evolutionary Cognition Biology
- In-Silico Genomics [Computational Systems Biology]
- Marine Biology
- Microbial Communities
- Microbial Ecology
- Microbial Symbioses
- Molecular and Cellular Neurobiology
- Molecular Plant Physiology
- Morphology of Animals
- Nutritional Physiology/Molecular Nutrition
- Nutritional Sciences (Special Human Nutrition)
- Pharmaceutical Biotechnology
- Pharmaceutical Chemistry
- Pharmaceutical Sciences
- Pharmaceutical Technology
- Pharmacognosy
- Pharmacognosy (Pharmaceutical Biology)
- Pharmacoinformatics
- Pharmacology and Toxicology
- Physiology and Ecology of Plants
- Plant Systematics and Evolutionary Research
- Population Ecology
- Structural Botany
- Vegetation Science
- Zoology [Theoretical Biology]
- Zoology and Marine Biology

- Zoology with Special Consideration of Morphology, Ecology and Neurobiology

4.15.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Didactics of Biology (cooperation with the Centre for Teacher Education)
- Limnology
- Neurobiology

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

Subject dedication of professorship:
Theoretical Evolutionary Biology

Time of appointment: following vacancy of the Professorship of Zoology (presumably as of 1 October 2018)

Subject dedication of professorship:
Pharmaceutical Technology and Biopharmacy

Time of appointment: following vacancy of the Professorship of Pharmaceutical Technology (presumably as of 1 October 2018)

Subject dedication of professorship:
Pharmacology and Toxicology

Time of appointment: following vacancy of the Professorship of Pharmacology and Toxicology (presumably as of 1 October 2019)

Subject dedication of professorship:
Marine Biology

Time of appointment: following vacancy of the Professorship of Marine Biology (presumably as of 1 October 2023)

Future professorships subject to availability of funds

Subject dedication of professorship:
Public Health Nutrition

(joint appointment with the Medical University of Vienna)

Subject dedication of professorship:
Geobiology

(joint appointment with the Faculty of Earth Sciences, Geography and Astronomy)

Subject dedication of professorship:
Ecological Modelling

Subject dedication of professorship:
Molecular Drug Targeting

(cooperation with the Centre for Molecular Biology with regard to advertising and recruitment)

Subject dedication of professorship:

Sports Nutrition

(joint appointment with the Centre for Sport Science and University Sports)

Subject dedication of professorship:

Microbial Viruses

Subject dedication of professorship:

Genetics of Bacterial Non-Model Organisms

Subject dedication of professorship:

Neuroscientific Foundations of Human-Animal Interaction

(joint appointment with the University of Veterinary Medicine, Vienna; cooperation with the Faculty of Psychology with regard to advertising and recruitment)

4.Z1 Centre for Translation Studies

4.Z1.1 Objectives

As part of the humanities, the discipline of translation studies focuses on translation as a specialised dimension of communication, and thus generates knowledge that is of particular relevance in a globalised world, where transcultural processes have become increasingly important.

These processes – of communication in general, of the generation, transfer and transformation of knowledge in the past and in the present day – are interrelated in many ways and closely connected with the act of translation, which frequently is a prerequisite for such processes to happen. Studying these processes often provides orientation for future actions.

The discipline of translation studies is oriented towards acquiring a better understanding for, as well as promoting, transcultural communication in a globalised world. The focus is on all forms of translation as mediated and interlingual communication, which is studied at the levels of processes, products, functions and actors with a cross-border perspective. These processes are complemented and in part replaced by, or overlap with, multilingual or lingua-franca communication, as well as intralingual and intersemiotic translation, as interfaces to which translation studies are paying increasing attention.

The dimension of space and time in transcultural acts is of particular relevance, and is reflected in research into the interrelations in, and the complexity of, historical and present-day processes of transcultural and lingua-franca communication, in addition to the examination of individual and social multilingualism.

This diversity along with the corresponding intensive interactions of social phenomena in business, politics, society and the academic world, require appropriate understanding of the manifold transcultural communication processes involved. Basic and applied research at the Centre for Translation Studies focuses on these questions, as well as on the examination, representation and modelling of these processes in digital formats. The Centre thus provides the prerequisites for academic teaching that also includes professional orientation, and is thus in a good position to respond to the dynamic changes in translation as a profession.

4.Z1.2 Key Research Areas

The Centre for Translation Studies focuses on the following key research areas:

Technologies and cognitive processes in translation and multilingual language data processing

Research in this area is oriented towards the further development of 'language technology ecosystems' that have in recent years emerged at the international level and comprise a multitude of tools for machine and computer-aided translation and interpretation, language industry and the corresponding multilingual terminological and other multimodal language resources. The themes studied include modelling on the basis of cognitive science and representation of terminological dynamics, linguistic diversity and variation in multilingual technical communication; the cognitive demands (usability, accessibility) that different groups of users have on technological language tools and language resources; the possibilities and limitations of the formalisation and automation of the processes of translation in the international language industry and the assessment of the socio-cognitive and socio-communicative effects of this technological development. It is of key relevance here to advance the new paradigms of machine translation, the multilingual semantic web and the processing of terminology data from the viewpoint of cognitive informatics, as well as from the perspective of socio-cognitive technology assessment.

Translation and transcultural communication in social, institutional and media contexts

This key research area examines processes of translation and the manifold media manifestations of translation in different socio- and transcultural communication contexts in the age of globalisation. Research in this field studies the function and effect of translations in the historical and present-day structures of the target culture, the position and role of translators and

interpreters in specific institutional contexts, as well as the identification and clarification of the links between translation and other forms of multilingual communication (and lingua-franca communication). This includes research into the conditions for and consequences of collective and individual multilingualism for the future of translation and transcultural communication. The theories and methods of the social sciences, as well as approaches based on discourse analysis and critical reflection provide important input here. Regarding translation, discussion focuses on the processes of mediation and their general framework in various social fields, such as transcultural technical communication and the production of works of literature and media; and regarding interpreting, the communicative act of interpreting in public agencies, in court and in health institutions in a society that is becoming increasingly multicultural is of key interest.

4.Z1.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Chinese Studies (20 %; 80 % at the Faculty of Philological and Cultural Studies)
- Interpreting Studies and Didactics of Translation
- Transcultural Communication
- 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:
Transcultural Communication

Time of appointment: following vacancy of the Professorship of Transcultural Communication (presumably as of 1 October 2018)

Future professorships subject to availability of funds

Subject dedication of professorship:
Computational Terminology and Machine Translation

Subject dedication of professorship:
**Interpreting Studies with a Focus on
Community Interpreting**

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 treatment settings. Sport is an important topic in the mass media and a central factor in the business world. As sport is such a multifaceted topic it is imperative to engage in academic research, assistance and consulting in order to enhance its positive effects and minimise negative impacts.

Sport science encompasses several subdisciplines such as sports physiology, biomechanics, 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. It is characterised by a great variety of theoretical and methodological approaches, which come from the natural sciences, humanities, social sciences and other academic 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. It is therefore aimed at encouraging cooperation across different disciplines and the joint use of available resources. The existing cooperation within and between universities, as well as the Centre's integration into national and international networks will be used to acquire competitive third-party funding.

The Department of Sport Science and the University Sport Institute (USI) form an organisational unit of the University of Vienna, and cooperate with the Austrian Institute of Sports Medicine



(ÖISM) and the Olympic Center of the Austrian Olympic Committee.

4.Z2.2 Thematic Areas and Key Research Areas

Human activity, social processes and structures in sport, as well as the interactions between society and sport are analysed by means of theoretical and methodological approaches. Social change – e.g. modernisation, globalisation and migration – is reflected in sport and influences the field of activities of sport science. The sports-related organisation, behaviour and experience of individuals and groups is studied in practical research.

In modern society, an increasing number of people have an identity in sport, in addition to their identities in their families, jobs, etc. The rising relevance of sports-related identities of persons, organisations and nations is studied in the context of social history.

The corresponding research activities cover the following areas:

Education and health promotion

Effective and efficient 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 communication of expertise to instructors. In future, inclusive approaches to take cultural and social diversity into account will be of particular importance in this field. The effects that sport and exercise have on society's learning culture and the system of education, health and school are analysed theoretically and empirically.

In view of widespread physical inactivity, and the associated lifestyle diseases (e.g. cardiovascular diseases or cancer), sport and exercise play an important social and socio-economic role. In spite of well-founded knowledge about the health benefits of physical activity, children, young people and adults, as well as elderly people do not exercise enough. The fundamental correlations and interventions that are necessary for establishing an attractive, healthy lifestyle in the long run, as well as techniques for encouraging change in behaviour and commitment to sport are therefore studied.

Performance by intervention

The key characteristic of the social subculture of sport is the direct objectivising of human behaviour in intra- and interindividual comparison. Studies in sport science provide the theoretical basis for new practical, informational and technological developments in sports contexts.

In addition, the academic examination of the biomechanical, motor, physiological, biological and coaching-related, social and psychological aspects of sport and exercise 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 regaining physical capability plays a key role. The analysis of physical capability is, in turn, the prerequisite for successful interventions, as well as for planning and controlling coaching and therapeutic exercise.

4.Z2.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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 Sport Informatics
- Sociology of Sport
- Sport and Physical Activity

4.Z2.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Sport and Exercise Physiology

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

Subject dedication of professorship:

Sport Coaching with Biological Orientation

Time of appointment: following vacancy of the fixed-term Professorship of Coaching and Kinesiology (with Biological Orientation) (presumably as of 1 March 2020)

Subject dedication of professorship:

Sociology of Sport and Sport Economics

Time of appointment: following vacancy of the Professorship of Sports Sociology (presumably as of 1 October 2019)

Future professorships subject to availability of funds

Subject dedication of professorship:

Sports Nutrition

(joint appointment with the Faculty of Life Sciences)

Subject dedication of professorship:

Sports Technology

Subject dedication of professorship:

Sport Pedagogy

(cooperation with the Faculty of Philosophy and Education with regard to advertising and recruiting)

4.Z3 Centre for Molecular Biology

4.Z3.1 Objectives

The Centre for Molecular Biology of the University of Vienna and the Centre for Medical Biochemistry of the Medical University of Vienna together comprise the Max F. Perutz Laboratories (MFPL). The company MFPL Support provides the necessary infrastructure for a successful research environment.

The MFPL has set itself the goal of creating an academic environment which requires, and encourages, outstanding scientific achievements across university borders. The MFPL is committed to excellent basic research, paralleled by a strong awareness of translational medicine and clinical applications. The MFPL and its partner institutions at the Vienna Biocenter, building on existing structures of academic cooperation, have created a centre of excellence of international standing. The Centre's current assets will be enhanced further by recruiting outstanding researchers, by encouraging women to pursue careers in science, and by further developing the key research area of molecular mechanisms of disease.

In the old days, the natural sciences were divided into separate fields such as biology, chemistry and physics; however, as science has advanced, these fields have become permeable and interdisciplinary, which has led to entirely new avenues of enquiry. In order to retain and increase the competitiveness of the MFPL, it is crucial to identify and react to the constant progress that takes place in science at the international level. Importantly, innovation not only depends on brilliant ideas and chance; it often happens at the interface of traditionally separated disciplines and is strongly promoted by new technologies. The MFPL will thus explore

areas which are on a steep rise or are on the verge of becoming a major driver of innovation. The following main themes have been proposed in this field: 1) investigation of cellular dynamics with advanced imaging methods, which allows unprecedented insights into intracellular communication with astounding temporal and spatial resolution; 2) analysis of the various layers of gene expression and nuclear architecture at the single-cell level, which eliminates the 'averaging effect' of population-based experiments and follows the molecular fate of single cells as they differentiate; 3) attempts to reconstitute higher-order cellular function from its component parts, a discipline not explored enough yet so as to enable a new understanding of the biology of this function; 4) investigation of the ultrastructure of macromolecular assemblies, which is based on the recent 'resolution revolution' in structural biology driven by advances in single-particle cryoelectron microscopy; and 5) the quantitative modelling of cellular networks, which is based on the premise that biology is too complex to be understood by intuition alone but rather needs description and modelling on a numerical basis to make testable predictions. The MFPL strives to keep pace with the contemporary developments in the life sciences by attracting leading experts in these emerging areas. In addition, the MFPL also aims to establish links to the existing, and increasing, expertise in cognition and neuroscience at the University of Vienna, which will particularly strengthen the ties with the Faculty of Life Sciences and the Medical University of Vienna. Finally, in order to successfully tackle the challenges of scientific interdisciplinarity, and to increase the international competitiveness of the University of Vienna in this field, joint appointments with different research institutions, particularly at the Vienna Biocenter, are currently being considered.

4.Z3.2 Thematic Areas and Key Research Areas

Molecular biology is the key thematic area researched at the MFPL, which includes the analysis of the structure, biosynthesis and function of DNA, RNA and proteins, at molecular, cellular and organismal levels. Research at the MFPL comprises the seven established key research areas described below, which the scientists involved pursue at an internationally competitive level. The research in these areas encourages cooperation within the MFPL and related departments, with additional departments of the University of Vienna, and with the Medical University of Vienna as well as with closely associated institutions (Institute of Molecular Pathology, IMBA Institute of Molecular Biotechnology, Gregor Mendel Institute) at the Vienna Biocenter. The research areas that have been defined also contribute to providing the best possible preparation for doctoral candidates and postdocs for



successful careers in science and science-related areas characterised by increasing competition. The MFPL also emphasises the links rather than the differences between life sciences and other, traditionally separated disciplines. Fruitful connections exist between groups conducting basic research and clinical research, between biologically oriented researchers and those specialising in computer science and mathematics. The MFPL will further strengthen the links with the Faculties of Life Sciences, of Chemistry and of Mathematics.

Immunology and infection biology

The necessity of coping with the world of pathogenic microbes continues to be part of human life, even in the modern era of antibiotics. New pathogens, 'superbugs' that are resistant to antibiotics and fear of viral pandemics have all raised people's awareness of the danger of infectious diseases. The working groups in the key research area of infection biology focus on pathogenic fungi, bacteria and viruses to generate fundamental knowledge about molecular mechanisms of host-pathogen interactions, including states of disease. They study molecules and molecular interactions that are relevant for the development of acute, chronic and lethal infections. Molecules involved in the detection of microbes, their absorption into host cells and the initiation

of defence reactions are of particular interest here. Increasing attention is also paid to homeostatic mechanisms that preserve the integrity of host tissues during an intensive inflammatory response against the pathogen. MFPL researchers address these questions at the molecular-mechanistic level by employing biochemical and cell biology studies, unbiased screens as well as systems biology and genome-wide approaches. This key research area boasts particularly strong and broad expertise in the analysis of host-pathogen interactions, which include important viral, bacterial and fungal infectious agents. This area will continue to represent a major area of development in the future, owing to continuously expanding expertise regarding different pathogens, as well as growing interdisciplinarity. It increasingly connects to studies on metabolism, autophagy and microbial communities. Particular emphasis is placed on both qualitative and quantitative traits that regulate the immune system. The long-term goal of the immunology and infection biology research is to comprehensively describe physiological and pathological immune responses to pathogens, environmental pollutants as well as endogenous challenges such as cancer cells.

RNA biology

For 40 years, the versatility of RNAs have continued to surprise scientists: RNAs contain genetic information, and can also catalyse chemical reactions and regulate almost every step in gene expression. RNAs can guide proteins and enzymes to their site of action, and are major players when cells need to adapt to new environmental conditions. RNAs control genetic circuits that are especially important for host-pathogen interactions. RNAs play a crucial role during embryonic and cancer development. Furthermore, RNA-based therapeutics are being developed to treat genetic and infectious diseases, and their application is already clinically used. RNA-based genome editing has not only revolutionised research, it may also coin a new era in medicine and industry. The latest discoveries are pointing to more frequent and diverse modifications of RNA molecules than anticipated, thus creating a new field of research: the 'epitranscriptome'. RNA research at the Centre for Molecular Biology follows an integrative strategy combining approaches of biochemistry, cell biology, genetics, microbiology, structural biology and bioinformatics. The interdisciplinary research and training programme addresses the biogenesis, the structure and the functions of RNAs and their modifications in cellular and pathological processes in many different organisms from bacterial pathogens to human cells.

Cell signalling

Cells need to interpret external and internal signals and translate them into biological processes in order to survive, proliferate and differentiate. If signal transduction fails, even in a limited number of cells, the whole organism is at risk. The research groups in the key research area of cell signalling use advanced methods of biochemistry, molecular biology, cellular biology and genetics in order to examine signal transduction in different experimental systems (from yeast to mice). A long-standing common point of interest is investigating the effects that post-translational protein modifications and formation of protein complexes have on the biogenesis and regulation of signal-transmitting networks, as well as the positive and negative feedback loops which control the interaction of specific signalling pathways to ultimately generate different and adaptive biological outputs. The key research area of cell signalling is extremely interactive with, and closely connected to, the other research areas: integrative structural biology, immunology and infection biology, as well as computational biology and bioinformatics. Most of the cell signalling scientists focus on disease-relevant molecules and processes and are also involved in the key research area of molecular mechanisms of disease, and expect to help advance this area.

Integrative structural biology

The research hallmark of this area is the integration and complementary employment of high-end structural biology, biophysical approaches and advanced computational tools to provide unique and novel information on biomolecular structure, dynamics, thermodynamics and interactions, offering unique opportunities in molecular biology and biomedical research.

Its experimental approaches include X-ray crystallography and NMR, combined with medium-resolution techniques including small-angle X-ray scattering, electron and light microscopy, distance-sensitive spectroscopy and mass-spectroscopy techniques, complemented by physico-chemical and biochemical characterisation. The computational approach capitalises on a physico-chemical perspective to provide information on protein and RNA functionalities. Structural studies range from systems involved in tumour, neuro- and muscle biology, organelle biosynthesis and virology/parasitology to lipid-activated signalling in health and disease. Tight links exist, and enhanced collaboration is planned with the key research areas of molecular mechanisms of disease, cell signalling, RNA biology, computational biology and bioinformatics, and with the Medical University of Vienna.

Intended new research topics include: (1) structural studies of large macromolecular assemblies by single particle cryo-electron microscopy, which is revolutionising structural biology, in close partnership with the Vienna Biocenter/ Institute for Molecular Pathology and the Institute for Science and Technology Austria – both partners are interested in a joint operation; (2) high-end optical spectroscopy and light microscopy, an integral part of the research area of integrative structural biology; (3) quantitative biology to bridge novel theoretical concepts with high-end quantitative experimental techniques, with a focus on molecular descriptors and their application to address biological problems.

Computational biology and bioinformatics

The aim of this key research area is to develop and utilise a range of different theoretical and computational approaches in order to understand the structure, function and evolution of biologically important molecules at the atomic, molecular and supra-molecular levels, in close collaboration with experimentalists. The work in this area focuses on RNA- and protein dynamics, protein-protein and protein-nucleic acid interactions, ligand-receptor interactions, intrinsically disordered proteins and molecules of F-actin-based cytoskeletons as well as molecular evolution, genomics, population genetics, statistical genetics and methodological developments

in the context of molecular dynamics simulations of biomolecular complexes. Moreover, it focuses on the development of new methods of processing and analysing the rapidly growing volume of data generated by genome projects and related studies.

The key research area of computational biology and bioinformatics benefits from close cooperation with other key research areas, including integrative structural biology at the University of Vienna and biomedical research at the Medical University of Vienna. A further intensification of collaborative links is among the objectives set for the future, including enhanced cooperation with the interdisciplinary research platforms recently established at the University of Vienna and research clusters like the Comprehensive Cancer Centre at the Medical University of Vienna. Moreover, the modelling expertise of the key research area of computational biology and bioinformatics constitutes an important building block for understanding deviations from normality (not only at a descriptive but also at a more detailed microscopic level) and thus provides a natural link to modelling the origin of diseases.

Chromosome dynamics

If an organism is a sophisticated network, the genome is its master plan.

This concept is reflected in the medical sciences in the advance of 'personalised medicine', where genomic contributions to all medical conditions are being considered. Chromosomes are the physical representation of the genome. The chromosome field directly impacts on diverse topics such as fertility, reproduction, cancer and ageing. Numerous observations link reproductive problems with a decreased life span, cancer susceptibility and in extreme cases, mental retardation. It thus seems imperative to intensify the studies of the chromosome field to understand how the genome maintains its stability, replicates, repairs, recombines, and distributes. In many aspects such as the 3-dimensional, dynamic organisation of chromosomes this field is still young and holds great potential, as even basic concepts are still missing, or are controversial.

Aneuploidy, which is the result of somatic missegregations, can cause cancer due to loss of heterozygosity, and invariably contributes to tumour heterogeneity and worsens prognosis. This key research area will expand its repertoire by taking advantage of the newest technological developments in genetics (e.g. gene editing and modulation), genomics (e.g. single-cell and deep long-distance sequencing), imaging (e.g. super resolution in live cells), and biochemistry (e.g. label-free protein quantification by mass spectrometry) to understand the related mechanisms

of chromosome structure, repair, recombination and segregation.

Molecular mechanisms of disease

This key research area represents a priority collaboration initiative with the Medical University of Vienna, with the ultimate goal of creating a link between (medical) basic research and clinical applications. A unifying theme in MFPL research is a strong drive to understand the mechanistic basis of biological processes in health and disease. The strength of the MFPL lies in analysing molecules, structures and newly identified mechanistic principles. This mechanistic angle provides an essential and solid foundation for the interpretation of the wealth of data that is generated by contemporary large-scale biology approaches (e.g. high-throughput genome/proteome/transcriptome science). This unique expertise at the MFPL will foster the development of a new key research area, which focuses on the molecular mechanisms of disease and acts on four levels: 1) as a strong tie to the Medical University of Vienna, with incentives to collaborate with clinicians; 2) as a pivot for several other life science departments in Vienna that share common scientific interests and provide complementary techniques and approaches; 3) as a teaching platform for students of biology and medicine alike; and 4) as an internationally recognised research area, which will serve as a recruiting platform. Besides valuable existing links to molecular medicine (e.g. cell signalling, RNA biology as well as immunology and infection biology, and structural biology), the MFPL will also encourage unconventional approaches. These include the modelling of complex diseases in simple organisms, the bottom-up reconstitution of disease-relevant processes, as well as quantitative and synthetic approaches to medicine using advanced technologies. Recently, the MFPL has begun to investigate the mechanisms driving cellular identity and stem cell differentiation. Understanding the complexities of cell fate regulation in molecular detail will be an essential milestone in harnessing the potential of stem cells in regenerative medicine. In the context of the NeuroCog neuroscience initiative of the University of Vienna, the MFPL aims to further strengthen the ties to the Center for Brain Research, the Center for Physiology and Pharmacology, and the Institute for Rare and Undiagnosed Diseases at the Medical University of Vienna. With appropriate investment, we expect all of these research areas to be drivers of future scientific success at the interface of the two partner universities and clinical research.



4.Z3.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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 Signalling
- Chronobiology
- Crystallography of Biomolecules
- Eukaryote Genetics
- Genetics
- Immunobiology
- Immunobiology

- Mathematics and Biology (20 %; 80 % at the Faculty of Mathematics)
- Membrane Biochemistry
- Microbiology
- Microbiology
- Molecular Bacteriology
- Molecular Biophysics
- Molecular Spectroscopy and Photochemistry
- RNA Biochemistry

4.Z3.4 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:

Cell and Developmental Biology

Time of appointment: funding via a vacant professorship at the Centre (presumably as of 2018)

Subject dedication of professorship:
Molecular Biology
(joint appointment with the Medical University of Vienna)
Time of appointment: funding via a vacant professorship at the Centre, jointly with the Medical University of Vienna

Subject dedication of professorship:
RNA Biologie
Time of appointment: following vacancy of the Professorship of RNA Biochemistry (presumably as of 1 October 2018)

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:
Ultrastructure of Macromolecular Assemblies
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:
Advanced Microscopy and Cellular Dynamics

Subject dedication of professorship:
Cellular Reconstitution and Biological Engineering

Subject dedication of professorship:
Chromosome Biology

Subject dedication of professorship:
Genome Biology at Single-Cell Level

Subject dedication of professorship:
Molecular Microbiology

Subject dedication of professorship:
Multiscale Analysis of Biological Systems

Subject dedication of professorship:
Quantitative Modelling of Cellular Networks
(joint appointment with the Faculty of Mathematics)

4.Z4 Centre for Teacher Education

4.Z4.1 Objectives

The Centre for Teacher Education unites all teacher education programmes at the University of Vienna under one roof and has contributed to sustainably increasing the visibility and recognition of teacher education as a central task of the University. Using a variety of academic exchange formats, it has been possible in recent years to strengthen the subject-specific working groups within the faculties and to establish links between them across different faculties, as well as with the Faculty of Education. The promotion of early-stage researchers is one of the Centre's key commitments. In addition to a platform for the interdisciplinary exchange between doctoral candidates, it also offers the opportunity for exchange concerning research methods in subject-specific didactic and education. Based on the existing doctoral programmes, a specifically structured doctoral programme is being developed.

One of key tasks of the Centre is to promote and initiate research in the areas of teaching and learning, and to make it available for practical education at school. Its main research activities and projects are represented by three thematic areas, which range from theory-based, historical basic research in the area of social sciences to questions of the professionalisation of teachers, and practical teaching and learning research.

The school system is facing major challenges, which include the radical adaptation of curricula and syllabuses, modifications of buildings as well as structural and regional reorientation. The University thus needs to tackle fundamental questions adopting a research-based approach in order to prepare students of Teacher Education for changes in the school sector. Basic research at the Centre will, as a first step, focus on three cross-sectional tasks of teacher education, and the questions thus raised illustrate possible key themes.

- In view of the fast, revolutionary change in media technologies, acquiring state-of-the-art equipment alone is not enough for schools to keep abreast of this development. However, a large proportion of pupils intensively use the newest technologies in everyday life, for social media and other networks;

and data and information are available at all times and everywhere for (almost) everybody. The role of this accessible knowledge for the process of learning needs to be examined. Will the fact that information is available at all times today invariably bring about a fundamental change in learning and teaching, with regard to methods and, especially, subject matter?

- In the context of globalisation and migration, diversity has become increasingly important as a characteristic of school. The resulting task for school-related research thus is to study the different, interwoven components of diversity (in terms of religion, language, culture, geography, etc.). Research is called upon to examine the effects that diversity has on processes of teaching and learning, as well as on educational biographies. How can school ensure participation under conditions of diversity? How must educational processes be structured so that diversity is understood, and recognised, as a valuable resource?
- It is not only inclusive education and the need for accessibility that constitute great challenges with regard to school buildings and especially the structural development of schools: It has, for instance, been established that buildings must take the pupils' demands into account and must be oriented towards the specific ways of perception and behaviour of its users, as well as towards the social needs of different age groups. The administrative and regional context of a school strongly influences school culture, as well as the appreciation and individual success of its users – both students and teachers. What forms of organisation, structures, and architectural requirements are needed for the school of tomorrow to provide appropriate conditions for the teaching and learning of future generations?

By introducing a specialisation in inclusive education (focus on impairments) a new degree programme has been made available that responds to a strong demand on the part of schools and meets with much interest by students. The university colleges of teacher education of the North-East Schools' Group play an active role in teaching in this area. The Centre is particularly committed to the support of research in the field of inclusive education.

The function of the Centre is to perform tasks in the area of teacher education across different faculties. In addition to research, its goals thus also include aspects beyond comprehensive 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 (sub-

ject, subject didactics, education 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 teachers 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 Teacher Education Studies Service Center, 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 model of cooperation schools and the *Kooperationsschule plus* title 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.

4.24.2 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 is covered by the thematic areas described below. 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.

School-related basic research

The focus of this area is on basic research into school teaching, which comprises the theory of education and school, as well as the history and systematics of education in the context of cultural history, based on analysis of social science approaches. This area also covers the theoretical foundation of subject didactics, as well as research into individual general aspects of teaching (e.g. classroom interaction).

Research on teacher professionalisation

Here, the focus of research is on the continuum of professionalisation and on drawing up sustainable programmes for the qualification and professionalisation of (future) teachers. This research area also comprises the analysis of professional knowledge (e.g. pedagogical content knowledge and teacher learning), facilitation and control of processes of learning and education, responses to violence, bullying and fear (including clinical/psychological research approaches), as well as school development (educational leadership).

Teaching-related teaching and learning research

This thematic area primarily covers subject didactics, and particularly subject-related and cross-curricular learning processes in pupils. Its research focuses on subject-related and subject-specific didactic problems of the transformation of subject matter into teaching and learning processes, as well as the analysis and development of teachers' professional knowledge and practice. The non-subject-related research areas particularly include political studies, language teaching and language learning. Teaching and learning in a situation of diversity and heterogeneity, as well as the challenge of inclusive schooling, are further areas of research.

4.Z4.3 Professorships as of 1 October 2017

For a better overview, all professorships (including any professorships initially financed by the ministry responsible for science and research) existing as of 1 October 2017 (section 98 and section 99, para. 3 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.

- Didactics of Chemistry (joint appointment with the Faculty of Chemistry)
- 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)
- English Linguistics (joint appointment with the Faculty of Philological and Cultural Studies)
- 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)
- Research on Schooling with Special Emphasis on Upper Secondary Education (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.Z4.4 Subject Dedication of Future Professorships and Status of Implementation

Professorships dedicated as of 1 October 2017

- Didactics of Biology (joint appointment with the Faculty of Life Sciences)
- Didactics of Computer Science (joint appointment with the Faculty of Computer Science)
- English Language Education (joint appointment with the Faculty of Philological and Cultural Studies)
- School Pedagogy with Particular Emphasis on Social, Cultural and Linguistic Diversity (cooperation with the Faculty of Philosophy and Education)

Future professorships subject to availability of funds

Subject dedication of professorship:

Digital Education and Learning

(cooperation with the Faculty of Computer Science with regard to advertising and recruiting)

Subject dedication of professorship:

School Development and Effectiveness

Subject dedication of professorship:

Research Methods in Subject Didactics



5. Degree Programmes at the University of Vienna

During the initial stage of the system changes introduced with the Bologna framework, a great number of diversified master's programmes have been implemented. The existing range of programmes continues to be consolidated further, taking the results of evaluations, as well as demand on the part of students, into account.

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.

Based on the existing degree programmes of the academic year 2017/18, 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 quality assurance procedures that have been carried out. They are not listed here.

For reasons of clarity, the following list is presented with regard to subjects; an overview of the numerous non-consecutive study options that are currently available is given 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 2017		Modifications planned
Diploma programmes		
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 2017		Modifications planned
Diploma programmes		
Law		No date for a conversion of the diploma programme in line with the Bologna framework has yet been scheduled.

5.3 Social Sciences, Business and Economics

Degree programmes as of 1 October 2017		Modifications planned
Bachelor's programmes	Master's programmes	
Journalism and Communication Studies	Journalism and Communication Studies Communication Science*	Modularised structure of the bachelor's programmes in the area of social sciences: A system of horizontally linked modules will be drawn up to permit connections between the subject-related modules of the four bachelor's programmes, which can be combined with other bachelor's programmes, thus enhancing the permeability between different 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	Establishment of a master's programme in Business Analytics
International Business Administration	International Business Administration	
Statistics	Statistics	
Economics	Economics*	
	Banking and Finance*	

5.4 Engineering Sciences

Degree programmes as of 1 October 2017		Modifications planned
Bachelor's programmes	Master's programmes	
Computer Science Business Informatics	Computer Science* Media Informatics* Business Informatics	

5.5 Arts and Humanities

Degree programmes as of 1 October 2017		Modifications planned
Bachelor's programmes	Master's programmes	
Prehistory and Historical Archaeology	Prehistory and Historical Archaeology	
Classical Archaeology	Classical Archaeology	
Egyptology	Egyptology	
Jewish Studies	Jewish Studies	
History	History Historical Research, 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	Dutch Studies	
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*	

Degree programmes as of 1 October 2017		Modifications planned
Bachelor's programmes	Master's programmes	
Scandinavian Studies	Scandinavian Studies	
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, Slovenian, Czech, Ukrainian)	Possible cooperation with Alpen-Adria-Universität Klagenfurt in the area of Slovenian is being explored to improve the research and teaching possibilities at both locations.
Hungarian Studies	Hungarian Studies	The bachelor's programme in Hungarian Studies and the bachelor's programme in Fennistics will, presumably as of 2019/20, be combined to form a bachelor's programme in Hungarian Studies and Fennistics. The combination of the master's programmes in Hungarian Studies and Finno-Ugrian Studies to form a master's programme in Hungarian Studies and Finno-Ugrian Studies will presumably take place as of the academic year 2019/20.
Fennistics	Finno-Ugrian Studies	
African Studies	African Studies	
Oriental Studies	Ancient Oriental Philology and Oriental Archaeology Arab World Studies Turkish Studies	It is planned to rename the bachelor's programme in Oriental Studies 'Languages and Cultures of the Middle East and North Africa'.
Languages and Cultures of South Asia and Tibet	Languages and Cultures of South Asia Tibetology and Buddhist Studies	
Japanology	Japanology	
Koreanology	Koreanology	
Sinology	Sinology	
Musicology	Musicology	
Linguistics	General 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	Cooperation with FH Campus Wien with regard to a bachelor's programme or master's programme is being explored.

5.6 Natural Sciences

Studienangebot zum 1. Oktober 2017		Modifications planned
Bachelor's programmes	Master's programmes	
Mathematics	Mathematics*	
Chemistry	Chemistry Biological Chemistry Chemistry and Materials Technology (degree programme established in cooperation with the Vienna University of Technology) 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)*	
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	It is planned to rename the master's programme in Anthropology 'Evolutionary Anthropology'.
Nutritional Sciences	Nutritional Sciences	
Psychology	Psychology	

Degree programmes as of 1 October 2017		Modifications planned
Bachelor's programmes	Master's programmes	
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 2017
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)*
Study of Religions
East Asian Economy and Society*
History and Philosophy of Science – HPS
Bioinformatics
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)*

Planned interdisciplinary degree programmes (no date for establishment has yet been scheduled)

Bachelor's programme in Neuroscience (cooperation with the Medical University of Vienna)
Master's programme in Philosophy and Economics
Master's programme in Medieval Studies
Master's programme in Data Science
Master's programme in Digital Humanities

5.8 Teacher Education and Degree Programmes Related to Teaching

Degree programmes as of 1 October 2017	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> <table border="0"> <tr> <td>Sports and Physical Education</td> <td>Computer Science</td> </tr> <tr> <td></td> <td>Italian</td> </tr> <tr> <td>Biology and Environmental Studies</td> <td>Catholic Religion</td> </tr> <tr> <td></td> <td>Latin</td> </tr> <tr> <td>Bosnian/Croatian/Serbian</td> <td>Mathematics</td> </tr> <tr> <td>Chemistry</td> <td>Physics</td> </tr> <tr> <td>Descriptive Geometry (teaching cooperation with the Vienna University of Technology)</td> <td>Polish</td> </tr> <tr> <td></td> <td>Psychology and Philosophy</td> </tr> <tr> <td>German</td> <td>Russian</td> </tr> <tr> <td>English</td> <td>Slovakian</td> </tr> <tr> <td>Protestant Religion</td> <td>Slovene</td> </tr> <tr> <td>French</td> <td>Spanish</td> </tr> <tr> <td>Geography and Economics</td> <td>Czech</td> </tr> <tr> <td></td> <td>Hungarian</td> </tr> <tr> <td>History, Social Studies and Political Education</td> <td>Inclusive Education (specialisation)</td> </tr> <tr> <td>Greek</td> <td></td> </tr> <tr> <td>Home Economics and Nutrition</td> <td></td> </tr> </table>	Sports and Physical Education	Computer Science		Italian	Biology and Environmental Studies	Catholic Religion		Latin	Bosnian/Croatian/Serbian	Mathematics	Chemistry	Physics	Descriptive Geometry (teaching cooperation with the Vienna University of Technology)	Polish		Psychology and Philosophy	German	Russian	English	Slovakian	Protestant Religion	Slovene	French	Spanish	Geography and Economics	Czech		Hungarian	History, Social Studies and Political Education	Inclusive Education (specialisation)	Greek		Home Economics and Nutrition		<p>Possible cooperation with Alpen-Adria-Universität Klagenfurt in the area of Slovene is being explored.</p>
Sports and Physical Education	Computer Science																																		
	Italian																																		
Biology and Environmental Studies	Catholic Religion																																		
	Latin																																		
Bosnian/Croatian/Serbian	Mathematics																																		
Chemistry	Physics																																		
Descriptive Geometry (teaching cooperation with the Vienna University of Technology)	Polish																																		
	Psychology and Philosophy																																		
German	Russian																																		
English	Slovakian																																		
Protestant Religion	Slovene																																		
French	Spanish																																		
Geography and Economics	Czech																																		
	Hungarian																																		
History, Social Studies and Political Education	Inclusive Education (specialisation)																																		
Greek																																			
Home Economics and Nutrition																																			
<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>	<p>Specialisation: Inclusive Education in the master's programme to obtain a teaching degree for secondary schools (general education)</p>																																		

Degree programmes as of 1 October 2017		Modifications planned
Sports and Physical Education	Computer Science Italian	Possible cooperation with Alpen-Adria-Universität Klagenfurt in the area of Slovene is being explored.
Biology and Environmental Studies	Catholic Religion Latin	
Bosnian/Croatian/Serbian	Mathematics	
Chemistry	Physics	
Descriptive Geometry	Polish	
(teaching cooperation with the Vienna University of Technology)	Psychology and Philosophy	
German	Russian	
English	Slovakian	
Protestant Religion	Slovene	
French	Spanish	
Geography and Economics	Czech	
History, Social Studies and Political Education	Hungarian	
Greek		
Home Economics and Nutrition		
In addition, the following programmes without compulsory combination of subjects also relate to teacher education:		
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 2017	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 Advanced Theological Studies/Religious Education 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>It is planned to establish interdisciplinary PhD programmes.</p> <p>As of 2017, the establishment of a joint PhD framework curriculum in Neuroscience has been discussed with the Medical University of Vienna.</p> <p>Curriculum modifications in the context of the institutional restructuring of the</p>





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