

GLOBAL RESEARCH UNIVERSITY PROFILES (GRUP)

2020 DATA REPORT



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1. Introduction

The Global Research University Profiles (GRUP) project was conducted by Center for World-Class Universities (CWCU) of Shanghai Jiao Tong University from 2011 to 2015 and by ShanghaiRanking Consultancy since 2016. The GRUP aims to develop a database on the facts and figures of around 1800 research universities in the world. The online survey of the GRUP had been designed to collect the basic information of these institutions such as number of academic staffs, number of students, total income, research income and so on. The survey results were combined with other performance indicators for these 1800 research universities in order to produce more comprehensive and customized comparisons of research universities at a global level.

2. Background

In 2003, researchers at CWCU of Shanghai Jiao Tong University developed the first multi-indicator global university ranking – Academic Ranking of World Universities (ARWU). Since 2009, the ARWU has been published and copyrighted by ShanghaiRanking Consultancy, which is a fully independent organization dedicating to research on higher education intelligence and consultation. Ever since the first publication, ARWU has attracted a great deal of attention from universities, governments and public media all over the world. One of the factors for the significant influence of ARWU is that it only employs data originated from third parties so that the reliability of data and result is ensured.

Nevertheless, the available third-party data on world universities is rare. Only a very limited number of useful indicators can be generated, which can hardly meet the increasing needs for the comparisons of global universities from various perspectives. That raises the concept of data collection and sharing, which is the purpose of Global Research University Profiles (GRUP) survey.

- (1) The customized benchmarking and ranking platform — GRUP platform (<http://www.shanghairanking.com/grup/index.html>) allows you to view and compare universities in different rank ranges and/or in different regions/countries in terms of 35 indicators about students, faculty and resources. It also allows universities to estimate their ranks in Academic Ranking of World Universities based on their actual or expected data on these indicators. By combining the survey data with those gathered from other sources, global rankings of universities by individual indicators are presented on the platform as well.

- (2) The data has been used to design the new rankings such as the [Ranking of Top Universities in Greater China](#). The GRUP survey results will be used in more future rankings when appropriate.
- (3) The GRUP Survey results are used to enrich the university profiles on ARWU Website -- [Universities](#) (<http://www.shanghairanking.com/Search.html>), which provide more information to the public.

Since 2016, ShanghaiRanking Consultancy started a separate data survey - “Data Exchange Program (DEP)” for Mainland Chinese universities. Analysis in this report is based on data collected from both GRUP and DEP.

3. Participation in GRUP Survey 2020

3.1 Basic Information about the Participants

Figure 1 shows the response rates for Top 100 universities, Top 500 universities and all universities ranked in ARWU from 2011 to 2020.

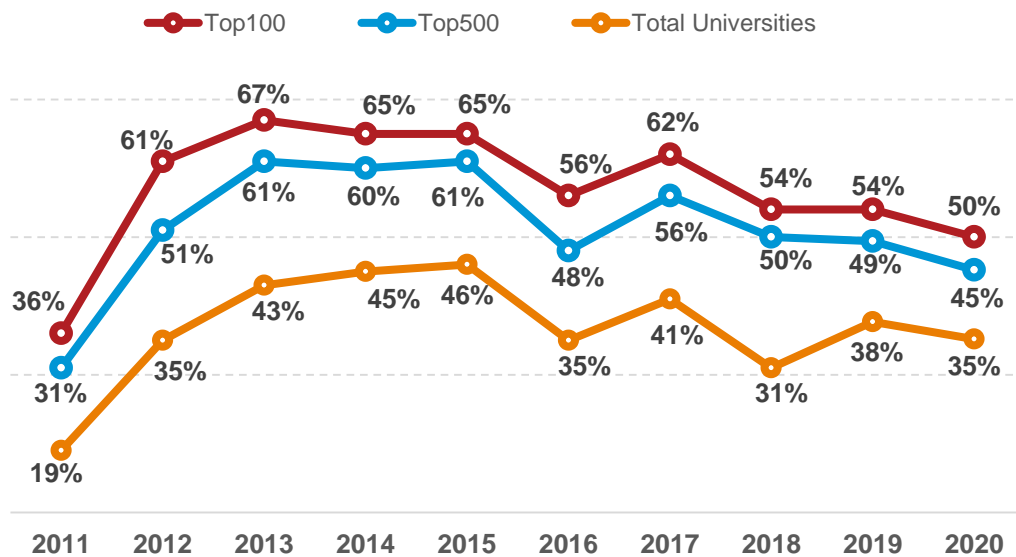


Figure 1. Percentage of Participating Universities from 2011 to 2020

In 2020, altogether 443 institutions completed the query datasheet of GRUP or DEP. They formed a representative sample set to describe and reflect the characteristics of world leading research universities.

Figure 2 indicates the number and distribution of participating institutions in 2020 Survey by their ranking range in ARWU 2020. It can be observed that the response rates for Top 500 institutions are over 40%. Universities in Top 100 have the highest response rate (50%).

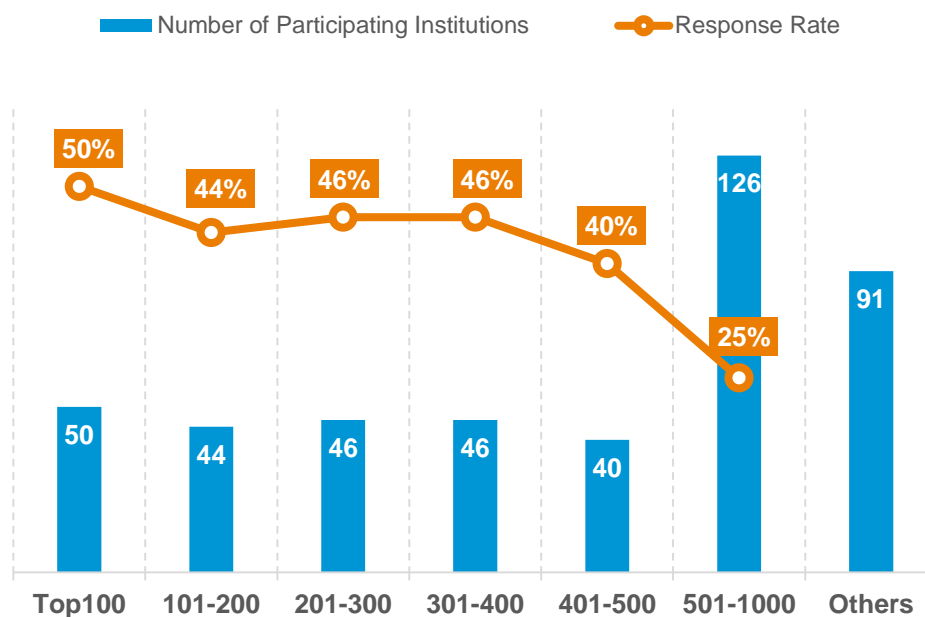


Figure 2. Response Rate of Participating Universities in GRUP 2020

Note:

Institutions which are not ranked in ARWU 2020 are included in the “Others”.

Figure 3 and Figure 4 demonstrate the distribution of participating institutions by region and country. There are 157 institutions in Asia participating in GRUP Survey 2020, accounting for 35.4% of all participants. As shown in Figure 4, China has 103 participating universities in GRUP and DEP, 73 of them are from China-mainland, and USA has 83 participating universities in 2020. A list of all participating institutions is given in Appendix 4.

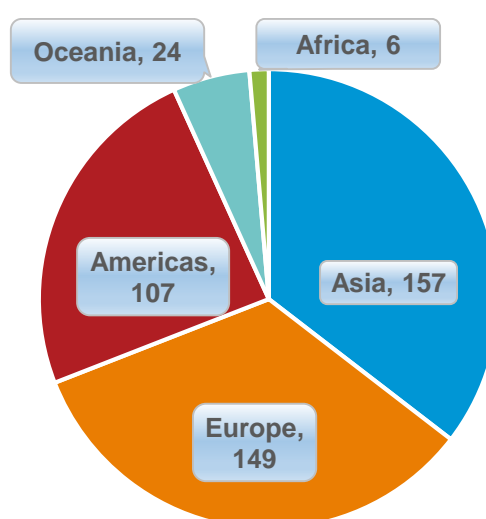


Figure 3. Distribution of Participating Institutions by Region 2020

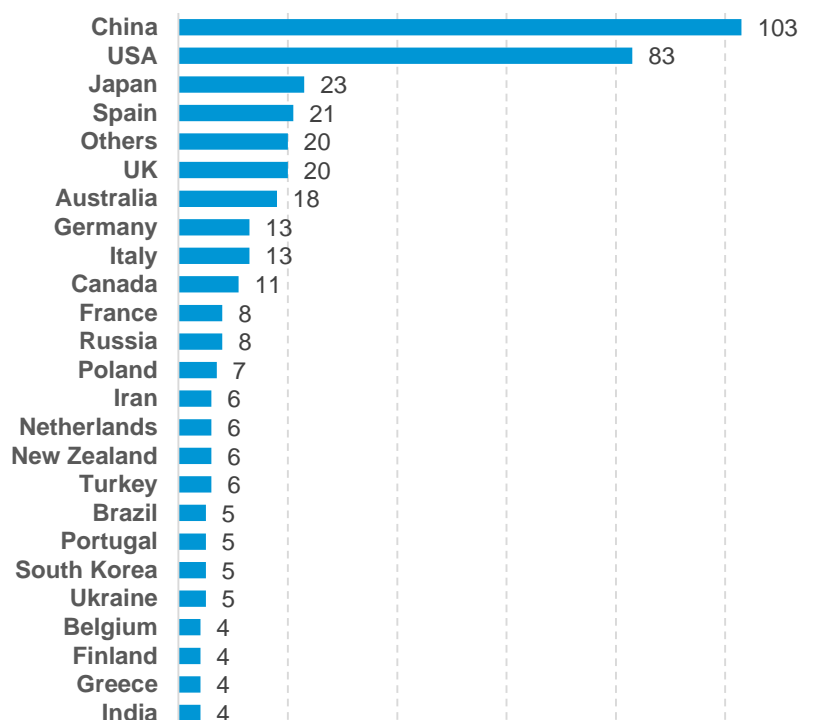


Figure 4. Distribution of Participating Institutions by Country 2020

Note:

1. Countries with 3 or less participating institutions are included in the “Others”.
2. Participating institutions in China include 73 in mainland, 22 in Taiwan, 5 in Hong Kong and 3 in Macau.

3.2 Performance in ARWU 2020

Institution Name: University of Maribor

Performance in Academic Ranking of World Universities: 1000+

4. Benchmarking Analysis Based on GRUP Survey 2020

GRUP survey serves as a comprehensive benchmarking tool and allows users to view and compare statistics of 40 indicators (13 indicators about Students, 9 indicators about Faculty, 13 indicators about Resource and 5 ARWU indicators) for institutions in different rank ranges and/or in different regions/countries. GRUP survey not only provides comprehensive and quantitative descriptions of world leading research universities, but also assists universities to identify their advantages and disadvantages as compared to those of their concern.

At the moment, the GRUP platform provides two functions: Benchmarking and Estimation. The benchmarking analysis based on indicators and universities groups is available for all participants with your access to the platform. Both the GRUP Indicators and groups of institution for Benchmarking are given in Appendix 1 and Appendix 3. In terms of the Estimation function, universities can input data for different indicators on the platform to arrive at an estimated ARWU rank.

4.1 Descriptive Statistics

Table 1 displays the example of benchmarking results for selected 15 indicators about faculty, students and resources about your institution. Of which:

4 indicators are about faculty:

- Number of Academic Staff (Teaching Related)
- Percentage of Academic Staff (Teaching Related) with Doctoral Level Degree
- Percentage of International Academic Staff (Teaching Related)
- Number of Academic Staff (Research Only)

5 indicators are about students:

- Number of Students (Degree-seeking)
- Percentage of Graduate Students
- Percentage of International Students
- Number of Doctoral Degree Awarded
- Ratio of Academic Staff (Teaching Related) to Students

6 indicators are about resources:

- Institutional Income (Millions of USD)
- Institutional Income per Student (Thousands of USD)

- Percentage of Income from Public Sectors
- Research Income (Millions of USD)
- Research Income per Academic Staff (Thousands of USD)
- Percentage of Research Income from Public Sector

For more individualized benchmarking, please access your account at the GRUP Platform
<http://www.shanghairanking.com/grup/index.html>.

**Table 1. Comparison of University of Maribor and ARWU 1000+ Institutions with
Selected 15 Indicators**

Indicators	N	Max	Median	Min	Mean	University of Maribor
FACULTY						
Number of Academic Staff (Teaching Related)	71	3145	994	169	1133	886
Percentage of Academic Staff (Teaching Related) with Doctoral Level Degree	70	1	0.63	0.14	0.63	0.80
Percentage of International Academic Staff (Teaching Related)	70	0.63	0.03	0.00	0.07	0.02
Number of Academic Staff (Research Only)	61	2776	98	0	237	218
Number of Students (Degree-seeking)	69	58411	17394	1196	18729	12396
Percentage of Graduate Students	69	1.00	0.19	0.00	0.22	0.36
Percentage of International Students	67	0.35	0.04	0.00	0.06	0.07
Number of Doctoral Degree Awarded	46	375	80	3	100	63
Ratio of Academic Staff (Teaching Related) to Students	69	0.35	0.06	0.02	0.07	0.07
Institutional Income (Millions of USD)	67	12139.41	139.34	4.12	338.85	114.35
Institutional Income per Student (Thousands of USD)	65	637.67	7.73	0.59	21.82	9.22
Percentage of Income from Public Sectors	45	1.00	0.54	0.00	0.49	0.65
Research Income (Millions of USD)	67	2121.35	12.90	0.00	55.65	21.90
Research Income per Academic Staff (Thousands of USD)	60	1330.83	14.74	0.00	47.63	19.84
Percentage of Research Income From Public Sector	43	1.00	0.78	0.05	0.67	0.49

Note:

1. “--” represents the data is unavailable.
2. N: Number of Institutions with Valid Data.

4.2 Data Analysis

In the data analysis section, universities published in ARWU 2020 are divided into 6 groups, as can be seen from Figure 6 below, and indicator performance of these groups is presented.

4.2.1 Students

The average number of students and ratio of academic staff (Teaching Related) to students for each group of universities ranked in ARWU 2020 are shown in Figure 6. Universities ranked in group 101-200 has the highest average number of students (34902). Average number of students in all groups within Top 500 exceeds 24,000. The ratio of academic staff (Teaching Related) to student reflect the university's investment in teaching and education. Universities ranked in Top 100 are superior to that of other ranking groups in ratio of academic staff to students.

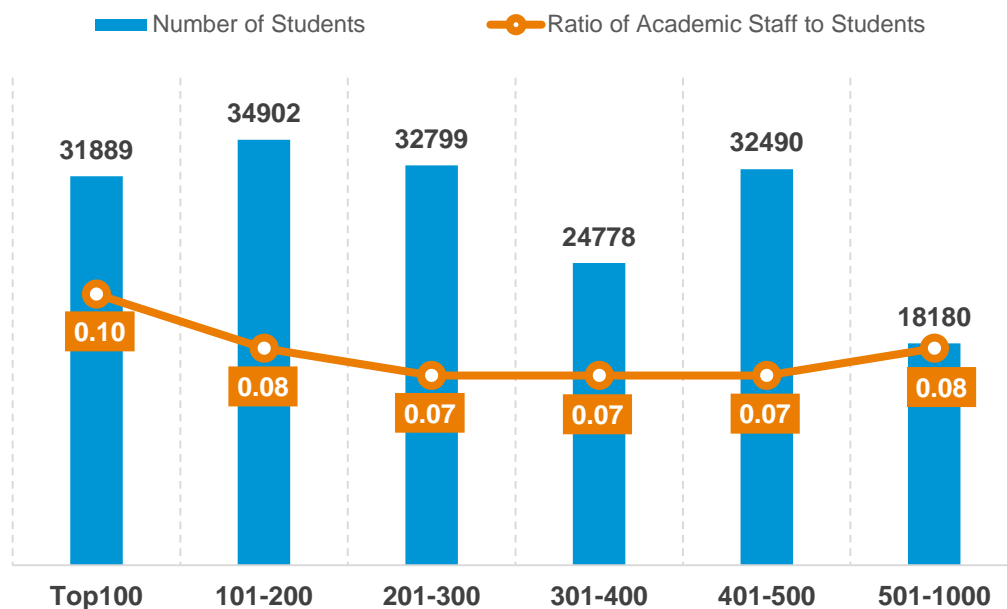


Figure 6. The Number of Students and Ratio of Academic Staff to Students

Figure 7 presents the average number of total undergraduate students, master's students and doctoral students of participating institutions. It also shows the average number of doctoral degree awarded in each ranking block. Doctoral students act as an important contributor to the research production for a university. Universities with better ranking performance had more doctoral students and awarded more doctoral degrees among all the universities. The average number of doctoral degree awarded of Top 100 universities is more than four times that of universities in group 500-1000.

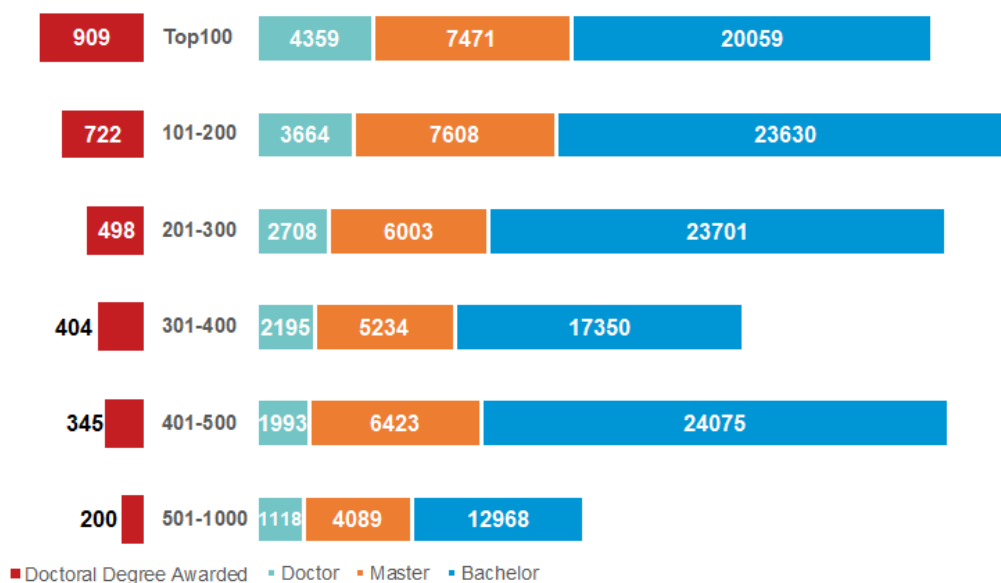


Figure 7. The Number of Students and Doctoral Degree Awarded

Figure 8 demonstrates the percentage of international total/undergraduate/Master's/Doctoral students across ARWU ranking range. Top 100 universities have the highest percentage of international students, which accounts for 24.4%. The percentage of international students in all groups within Top 300 exceeds 16.0%. Universities tend to have more international Master's and Doctoral students than international undergraduate students. About 35.5% Master's students within Top 100 universities come from overseas.

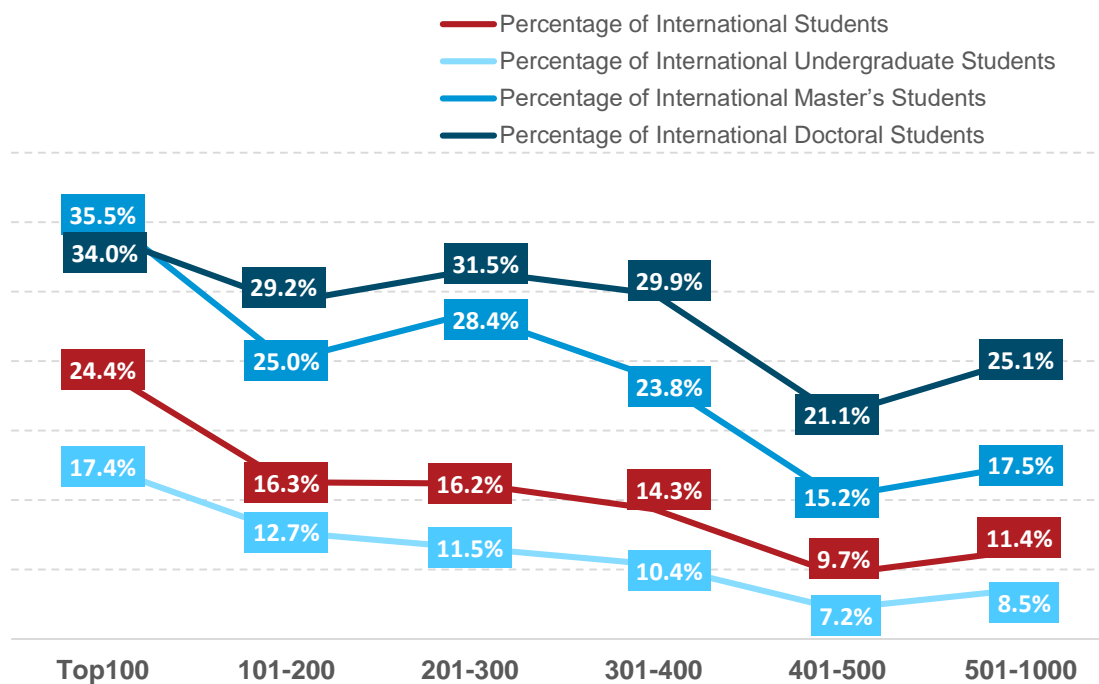


Figure 8. Percentage of International Students

4.2.2 Faculty

The average percentage of international academic staff (teaching related) contribute to our understanding of the degree of internationalization of universities. Figure 9 shows the average number of teaching related staff and the percentage of doctoral/international teaching related staff of participating institutions based on their ranking range in ARWU 2020. Top 100 universities have the highest number of teaching related staff, which is almost twice of that of 501-1000 universities. The percentage of doctoral teaching related staff within Top 400 universities exceeds 80%.

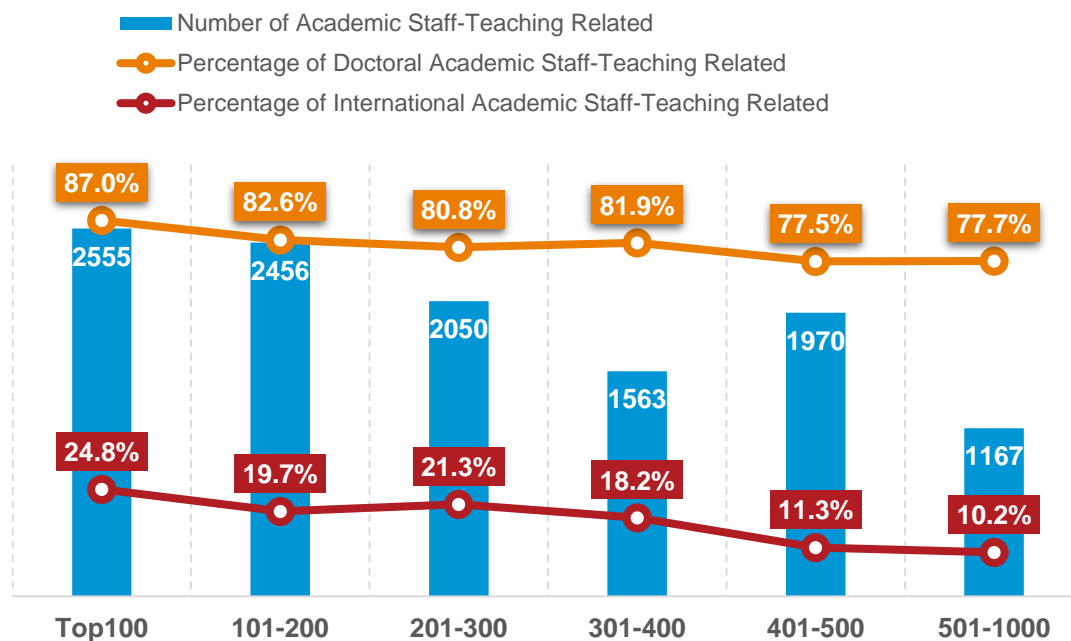


Figure 9. The number of Academic Staff-Teaching Related and Percentage of Doctoral/ International Academic Staff-Teaching Related

4.2.3 Resource

Figure 10 demonstrates the average institutional income (Millions of USD) from four main sources in different ranking ranges, including institutional income from governmental (public) sectors, income from student tuition and fees, income from institutional investments as well as donation/gifts income. Top 100 universities have highest average investment income (1162.7 million of USD), which is more than the total amount of the average investment income in other five groups within ARWU Top 1000. Universities in Top 100 also have the highest ratio of total income to student, which is almost five times of that in 401-500 universities.

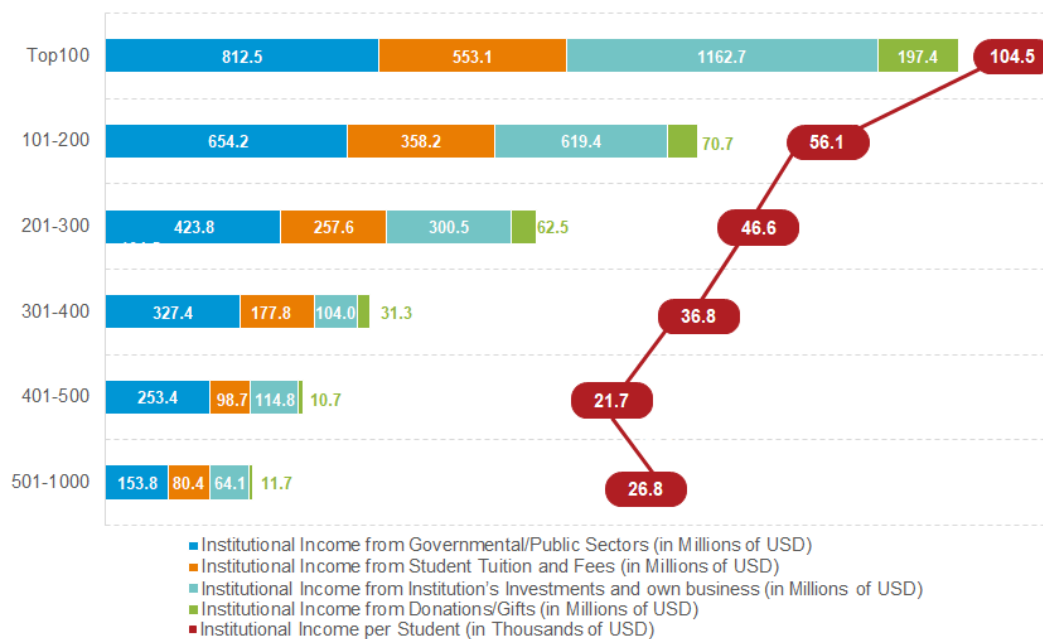


Figure 10. Institutional Income from 4 Main Sources and Ratio of Institutional Income and Students

Research Income refers to the overall income derived from externally sponsored research carried out by institution, the research income from governmental (public) sectors often occupies most of the total research income. It can be seen on Figure 11 that Top 100 universities have the highest research income, no matter from public source or industry. Their average ratio of research income and academic staff is also the highest among all universities, which is almost twice that of 201-300 universities and four times than that of universities among 301-400.

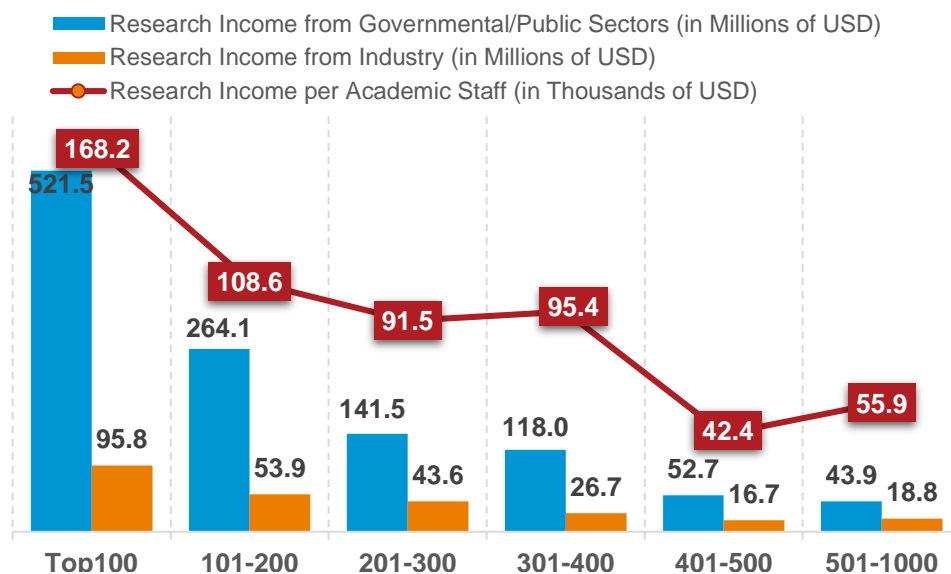


Figure 11. Research Income from Governmental/Public sectors and Industry and Ratio of Research Income and Academic Staff

Appendix 1 GRUP Indicators for Benchmarking

	Indicators
Students Indicators	Total Number of Students
	Number of Undergraduate Students
	Number of Master's Students
	Number of Doctoral Students
	Percentage of Graduate Students
	Percentage of International Students
	Percentage of International Undergraduate Students
	Percentage of International Master's Students
	Percentage of International Doctoral Students
	Number of Doctoral Degree Awarded
	Employment Rate of Bachelor Degree Recipients (0-3 months)
	Employment Rate of Master's Degree Recipients (0-3 months)
	Employment Rate of Doctoral Degree Recipients (0-3 months)
Faculty Indicators	Total Number of Academic Staff
	Number of Academic Staff (Teaching Related)
	Number of Academic Staff (Research Only)
	Percentage of Academic Staff (Teaching Related) with a Doctorate
	Percentage of Academic Staff (Research Only) with a Doctorate
	Percentage of International Academic Staff (Teaching Related)
	Percentage of International Academic Staff (Research Only)
	Ratio of Academic Staff (Teaching Related) to Students
	Ratio of Academic Staff to Students
Resources Indicators	Total Amount of Institutional Income
	Institutional Income per Student
	Institutional Income from Public Sectors
	Percentage of Institutional Income from Public Sectors
	Institutional Income from Student Tuition & Fees
	Institutional Income from Student Tuition and Fees per Student
	Institutional Income from Donations and Gifts
	Institutional Income from Institution's Investments
	Total Amount of Research Income
	Research Income per Academic Staff

	Indicators
Resources Indicators	Research Income from Public Sectors
	Percentage of Research Income from Public Sectors
	Research Income from Industry
ARWU Indicators	Number of Alumni of Nobel Laureates and Fields Medalists
	Number of Staff of Nobel Laureates and Fields Medalists
	Number of Highly Cited Researchers
	Number of Nature and Science Papers
	Number of SCIE and SSCI Papers

Appendix 2 Indicators Definition of GRUP Survey 2020

Notes:

Year of Data: The GRUP Survey 2020 collects the information of participating institutions in the 2018 calendar year or the 2018-2019 academic/fiscal year whichever appropriate.

FTE Number: Numbers of staff or students should be provided in Full Time Equivalents (FTE), unless otherwise noted. The formulas of calculating FTE are:

FTE number of academic staff: $[FTE = \text{the number of full-time academic staff} + (\text{the number of part-time academic staff}) * (\text{the FTE conversion factor})]$. The FTE conversion factor is calculated as the total hours worked of part-time staff divided by the number of hours in a full-time schedule. For example, if part-time staff work on average for one-third of the statutory hours of full-time staff, then the FTE conversion factor is 1/3.

FTE number of students: $[FTE = \text{the number of full-time students} + (\text{the number of part-time students}) * (\text{the FTE conversion factor})]$. The FTE conversion factor is calculated as the course load generated by part-time students during reference period divided by the normal course load during reference period.

B1. Number (FTE) of Academic Staff (Teaching Related)

-B1.1 Total

-B1.1.1 Of which hold doctoral-level degrees

-B1.1.2 Of which are overseas/international staff

-B1.1.3 Of which are qualified to supervise postgraduate students

Academic Staff (Teaching Related) - Total: refers to the FTE number of personnel who carry teaching/instruction duties, including those with released time for research, administration or service. This may include the staff holding an academic rank with titles such as professor, associate professor, assistant professor, clinical professor, instructor, lecturer, adjunct professor, adjunct associate professor, adjunct lecturer, or the equivalent of any of these academic ranks. This may also include chancellors, presidents, deans, medical practitioners, dentists, veterinarians and other health care professionals if they also undertake teaching duties. This excludes student teachers or teacher aides, research-only staff, post-

doctoral fellows, administrative officers (e.g. dean of students, registrar), support personnel (e.g. clerical staff, building operations or maintenance staff, librarian, security personnel, drivers, catering staff) and doctoral student.

Holding Doctoral-Level Degrees: refers to the number of Academic Staff (Teaching Related) who hold Doctor of Philosophy (Ph.D. or sometimes D.Phil) or its equivalent (e.g. Ed.D.), or other terminal degree appropriate to their academic field or discipline.

Overseas/International Staff: refers to the FTE number of Academic Staff (Teaching Related) who do not have the nationality of the country where your institution is located.

Qualified to Supervise Postgraduate Students: refers to the number of Academic Staff (Teaching Related) who are recognized to have the right to supervise students at master's, doctoral or its equivalent levels.

B2. Number (FTE) of Academic Staff (Research Only)

-B2.1 Total

-B2.1.1 Of which hold doctoral-level degrees

-B2.1.2 Of which are overseas/international staff

-B2.1.3 Of which hold the academic rank "post-doctoral fellow"

Academic Staff (Research Only) - Total: refers to the FTE number of personnel who only carry research duties with no obligation for teaching. This may include the staff holding an academic rank with titles such as research professor, research assistant professor, research associate professor, research assistants, or post-doctoral fellows. This excludes doctoral students.

Holding Doctoral-Level Degrees: refers to the number of academic staff (research only) who hold Doctor of Philosophy (Ph.D. or sometimes D.Phil) or its equivalent (e.g. Ed.D.), or other terminal degrees.

Overseas/International Staff: refers to the FTE number of academic staff (research only) who do not have the nationality of the country where your institution is located.

Post-doctoral Fellow: refers to the FTE number of academic staff who hold the post-doctoral position/title and conduct research only.

B3. Number (FTE) of Students Enrolled at Bachelor's Level

-B3.1 Total

-B3.1.1 Of which are overseas/international students

Students Enrolled at Bachelor's Level - Total: refers to the FTE number of students who are undertaking courses at bachelor's or its equivalent level, usually requiring 3 or 4 years (or the equivalent) of full-time study.

Overseas/International Students: refer to the FTE number of students enrolled at bachelor's level who do not have the nationality of the country where your institution is located.

B4. Number (FTE) of Students Enrolled at Master's Level

-B4.1 Total

-B4.1.1 Of which study for academic/research master's degrees

-B4.1.2 Of which study for professional master's degrees

-B4.2 Of which are overseas/international students

Students Enrolled at Master's Level - Total: refers to the FTE number of students who are undertaking courses at master's or its equivalent level. Those students may be course-based, research-based, or a mixture of the two. Normally, those students may have earned a bachelor's or its equivalent degrees.

Students Studying for Academic/Research Master's Degrees: refers to the FTE number of students who are undertaking courses for Master of Arts (M.A.), Master of Science (M.S. or M.Sc.) or its equivalent degrees awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and for demonstrated ability to perform scholarly research. This excludes students enrolled at master's or its equivalent level for professional degrees, for example Master of Business Administration (M.B.A.), Master of Education (M.Ed.), Master of Fine Arts (M.F.A.) and Master of Public Administration (M.P.A.).

Students Studying for Professional Master's Degrees: refers to the FTE number of students who are undertaking courses for a professional master's degree such as Master of Business Administration (M.B.A.), Master of Education (M.Ed.), Master of Fine Arts (M.F.A.), Master of Public Administration (M.P.A.), Masters of Laws (LL.M.) and Masters of Science in various medical specializations (M.S.).

Overseas/International Students: refer to the FTE number of students enrolled at master's level who do not have the nationality of the country where your institution is located.

B5. Number (FTE) of Students Enrolled at Doctoral Level

-B5.1 Total

-B5.1.1 Of which study for academic/research doctoral degrees

-B5.1.2 Of which study for professional doctoral degrees

-B5.2 Of which are overseas/international students

Students Enrolled at Doctoral Level - Total: refers to the FTE number of students who are undertaking courses at doctoral or its equivalent level. Normally, those students may have earned a bachelor's, master's or its equivalent degrees.

Students Studying for Academic/Research Doctoral Degrees: refers to the FTE number of students who are undertaking courses for academic/research doctoral degrees such as Doctor of Philosophy (Ph.D.), Doctor of Science (D.Sc./Sc.D.), or its equivalent degrees, which requires the preparation and defense of a dissertation based on original research to demonstrate ability to perform scholarly research.

Students Studying for Professional Doctoral Degrees: refers to the FTE number of students who are undertaking courses for professional doctorate degrees such as Doctor of Arts (D.A./D. Arts), Doctor of Business Administration (D.B.A.), Doctor of Education (Ed.D.), Doctor of Engineering (D.Eng./D.E.Sc./D.E.S.), Doctor of Health Science (D.H.Sc.), Doctor of Juridical Science (J.S.D./S.J.D.), Doctor of Music (D.M.), Doctor of Nursing Science (D.N.Sc.), Doctor of Public Administration (D.P.A.), Doctor of Public Health (Dr.P.H.), Doctor of Sacred Theology (S.T.D.), which may have a substantial taught element and aim to develop an individual's professional practice and to support them in providing a contribution to (professional) knowledge. This also includes study for the professional degrees in fields such as Chiropractic (D.C. or D.C.M.), Dentist (D.M.D.), Law (L.L.B., J.D.), Medicine (M.D.), Optometry (O.D.), Osteopathic Medicine (D.O.), Pharmacy (Pharm.D.), Podiatry (D.P.M., D.P., or Pod.D.), Theology (M.Div., M.H.L., B.D., or Ordination), Veterinary Medicine (D.V.M.).

Overseas/International Students: refers to the FTE number of students enrolled at doctoral level who do not have the nationality of the country where your institution is located.

B6. Number of Doctoral Degrees Awarded

-B6.1 Total

-B6.1.1 Of which are academic/research doctoral degrees

Doctoral Degrees Awarded - Total: refers to the overall number of doctoral or its equivalent degrees awarded in reference year, which includes academic/research and professional

doctoral degrees.

Academic/Research Doctoral Degrees Awarded: refers to the number of doctoral degrees awarded that are academic/research doctoral degrees.

B7. Unemployment Rate of Graduates

-B7.1 -month/XXX-month unemployment rate of bachelor's degree recipients

-B7.2 -month/XXX-month unemployment rate of master's degree recipients

-B7.3 -month/XXX-month unemployment rate of doctoral degree recipients

Unemployment Rate of Bachelor's Degree Recipients: refers to the percentage of the total bachelor's degree recipients that is jobless, looking for a job, and available for work within 3 months after graduation. Those who have no job and are not looking for one, such as those who are continuing their studies, or who have a physical or mental disability that prevents them from participating in the labor force are not included in the labor force and are not considered unemployed. If the 3-month unemployment rate is not available, please choose the date you do employment survey and enter the figures.

Unemployment Rate of Master's Degree Recipients: refers to the percentage of the total master's degree recipients that is jobless, looking for a job, and available for work within 3 months after graduation. Those who have no job and are not looking for one, such as those who are continuing their studies, or who have a physical or mental disability that prevents them from participating in the labor force are not included in the labor force and are not considered unemployed. If the 3-month unemployment rate is not available, please choose the date you do employment survey and enter the figures.

Unemployment Rate of Doctoral Degree Recipients: refers to the percentage of the total doctoral degree recipients that is jobless, looking for a job, and available for work within 3 months after graduation. Those who have no job and are not looking for one, such as those who are continuing their studies, or who have a physical or mental disability that prevents them from participating in the labor force are not included in the labor force and are not considered unemployed. If the 3-month unemployment rate is not available, please choose the date you do employment survey and enter the figures.

B8. Institutional Income

-B8.1 Total

-B8.1.1 Of which was derived directly from governmental/public sectors

-B8.1.2 Of which was derived from student tuition and fees

-B8.1.3 Of which was derived from donations/gifts

-B8.1.4 Of which was derived from institution's investments and own business

Institutional Income - Total: refers to the overall income from funding sources such as government legislative appropriations/block funding, student tuition and fees, research grants and contracts, donations/gifts and endowment income, international agencies and other foreign sources, institution's trading activities, institution's investments, auxiliary enterprises sales and services.

From Governmental/Public Sectors: refers to the overall income directly from state/federal/regional/local governmental agencies or through an intermediate agency that are used for general institutional operations and research, which includes government legislative appropriations/block funding, research grants and contracts, student financial aids (e.g. scholarships, grants, loans and tax deductions), and charities (e.g. charitable foundations, charitable trusts).

From Student Tuition and Fees: refers to the overall income derived from all kinds of teaching courses and degree programs for which fees are charged. This may include tuition and fees from continuing professional development.

From Donations/Gifts: refers to the overall income from general and specific donations/gifts, including the income earned from the capital of the donations/gifts whether arising from the interest or dividends on investments, bank interest or rents from real property.

From Institution's Investments and Own Business: refers to the overall income from institution's investments and own business, including investments of endowment funds, income from institution's trading activities, and income from institution's auxiliary enterprise sales and services, etc.

Note:

B8.1 Total Institutional Income includes all the income stated in B9.1 Total Research Income.

B8.1.1 Institutional Income which was derived directly from governmental/public sectors includes B9.1.1 Research Income which was derived from governmental/public sectors.

B9. Research Income

-B9.1 Total

-B9.1.1 Of which was derived from governmental/public sectors

-B9.1.2 Of which was derived from industry

Research Income - Total: refers to the overall income derived from externally sponsored research carried out by your institution, including all research grants and contracts income from governmental (public) sectors, industrial/commercial companies, public corporations, foundations, charities, international organizations and so on.

From Governmental/Public Sectors: refers to the research grants and contracts income from governmental (public) sectors (state/federal/regional/local governmental agencies or intermediate agencies) and charities (e.g. charitable foundations, charitable trusts). This excludes all research grants and contracts income from public corporations.

From Industry: refers to the research grants and contracts income from industrial/commercial companies and public corporations.

Note:

B9.1 Total Research Income should be included in B8.1 Total Institutional Income.

B9.1.1 Research Income which was derived directly from governmental/public sectors should be included in B8.1.1 Institutional Income which was derived from governmental/public sectors.

B9.1.2 Research Income which was derived directly from industry may not be included in any 4 of sub-sectors in B8 Institutional Income.

Appendix 3 Groups of Institutions for Benchmarking

	Name of Groups	Institutions Included
Groups by ARWU	ARWU universities by ranking groups	Universities in ARWU Top 100, 101-200, 201-300, 301-400, 401-500, 501-1000
	ARWU Top 500 universities by continent	ARWU Top 500 universities in Americas, Asia, Europe, Oceania
	ARWU Top 500 universities by sub-region	ARWU Top 500 universities in Eastern Asia, Eastern Europe, Latin America, Northern America, Northern Europe, Southern Europe, Western Europe
	ARWU Top 500 universities by country/area	ARWU Top 500 universities in Australia, Canada, China, Germany, France, US, UK, etc.
	Best 20 universities by sub-region	Best 20 universities in Eastern Asia, Eastern Europe, Latin America, Northern America, Northern Europe, Southern Europe, Western Europe
	Best 10 universities by country/area	Best 10 universities in Australia, Canada, China, Germany, France, US, UK, etc.
National Groups	Australia: Go8 universities	Group of Eight member universities in Australia
	Canada: G10 universities	G10 Group of Canadian Research Universities
	Germany: EliteU universities	"Excellence Initiative" program universities in Germany
	Japan: N7 universities	National Seven Universities in Japan
	UK: Russell universities	Russell Group member universities in UK
	US: AAU universities	Association of American Universities member universities in US

Appendix 4 List of Participating Institutions of GRUP Survey 2020

Institution	Country/Region	Word Rank
Stanford University	USA	2
Massachusetts Institute of Technology (MIT)	USA	4
University of California, Berkeley	USA	5
Columbia University	USA	7
University of Chicago	USA	10
Cornell University	USA	12
University of California, Los Angeles	USA	13
University College London	UK	16
University of Washington	USA	16
University of Pennsylvania	USA	19
ETH Zurich	Switzerland	20
University of Michigan-Ann Arbor	USA	22
University of Toronto	Canada	23
Washington University in St. Louis	USA	23
Imperial College London	UK	25
University of North Carolina at Chapel Hill	USA	30
PSL University	France	36
University of British Columbia	Canada	38
Sorbonne University	France	39
University of Minnesota, Twin Cities	USA	40
Rockefeller University	USA	43
University of Colorado at Boulder	USA	44
Karolinska Institute	Sweden	45
University of California, Santa Barbara	USA	49
University of Munich	Germany	51
Utrecht University	Netherlands	52
University of Maryland, College Park	USA	53
The University of Queensland	Australia	54
University of Zurich	Switzerland	56
Heidelberg University	Germany	57
University of Southern California	USA	61
Vanderbilt University	USA	62
Shanghai Jiao Tong University	China	63
The Australian National University	Australia	67
Aarhus University	Denmark	69
University of California, Irvine	USA	69
University of Groningen	Netherlands	69
The University of New South Wales	Australia	74

Institution	Country/Region	Word Rank
University of Sydney	Australia	74
Leiden University	Netherlands	80
Nagoya University	Japan	83
Monash University	Australia	85
The University of Western Australia	Australia	85
University of Florida	USA	88
Boston University	USA	90
Carnegie Mellon University	USA	95
KU Leuven	Belgium	97
McMaster University	Canada	98
Université Grenoble Alpes	France	99
Fudan University	China	100
Aix Marseille University	France	101-150
Arizona State University	USA	101-150
Case Western Reserve University	USA	101-150
Huazhong University of Science and Technology	China	101-150
Indiana University Bloomington	USA	101-150
King Abdulaziz University	Saudi Arabia	101-150
Michigan State University	USA	101-150
Pennsylvania State University - University Park	USA	101-150
Radboud University Nijmegen	Netherlands	101-150
Rice University	USA	101-150
Rutgers, The State University of New Jersey - New Brunswick	USA	101-150
Southeast University	China	101-150
Sun Yat-sen University	China	101-150
The Chinese University of Hong Kong	China-hk	101-150
The Ohio State University - Columbus	USA	101-150
University of Amsterdam	Netherlands	101-150
University of Gothenburg	Sweden	101-150
University of Lausanne	Switzerland	101-150
University of Liverpool	UK	101-150
University of Sao Paulo	Brazil	101-150
University of Utah	USA	101-150
University of Warwick	UK	101-150
Vrije Universiteit Amsterdam	Netherlands	101-150
Beihang University	China	151-200
Jilin University	China	151-200
King Saud University	Saudi Arabia	151-200

Institution	Country/Region	Word Rank
London School of Economics and Political Science	UK	151-200
Osaka University	Japan	151-200
Sichuan University	China	151-200
Soochow University (China)	China	151-200
Tel Aviv University	Israel	151-200
The University of Adelaide	Australia	151-200
Tohoku University	Japan	151-200
Trinity College Dublin	Ireland	151-200
University of California, Santa Cruz	USA	151-200
University of Exeter	UK	151-200
University of Lisbon	Portugal	151-200
University of Massachusetts Amherst	USA	151-200
University of Missouri - Columbia	USA	151-200
University of Montpellier	France	151-200
University of Muenster	Germany	151-200
University of Rochester	USA	151-200
University of Waterloo	Canada	151-200
Wuhan University	China	151-200
Autonomous University of Barcelona	Spain	201-300
Beijing Institute of Technology	China	201-300
Charles University in Prague	Czech	201-300
China Medical University (Taichung)	China-tw	201-300
City University of Hong Kong	China-hk	201-300
Complutense University of Madrid	Spain	201-300
Curtin University	Australia	201-300
Dalhousie University	Canada	201-300
Dalian University of Technology	China	201-300
Dartmouth College	USA	201-300
Durham University	UK	201-300
George Mason University	USA	201-300
Hunan University	China	201-300
Iowa State University	USA	201-300
KTH Royal Institute of Technology	Sweden	201-300
National Autonomous University of Mexico	Mexico	201-300
North Carolina State University - Raleigh	USA	201-300
Northwestern Polytechnical University	China	201-300
Polytechnic University of Milan	Italy	201-300
Queen's University	Canada	201-300

Institution	Country/Region	Word Rank
Shenzhen University	China	201-300
Stony Brook University	USA	201-300
Sungkyunkwan University	South Korea	201-300
The Hong Kong Polytechnic University	China-hk	201-300
The University of Auckland	New Zealand	201-300
The University of Georgia	USA	201-300
University of Connecticut	USA	201-300
University of Delaware	USA	201-300
University of East Anglia	UK	201-300
University of Houston	USA	201-300
University of Innsbruck	Austria	201-300
University of Iowa	USA	201-300
University of Kansas	USA	201-300
University of Liege	Belgium	201-300
University of Miami	USA	201-300
University of South Florida	USA	201-300
University of Tasmania	Australia	201-300
University of Technology Sydney	Australia	201-300
University of the Witwatersrand	South Africa	201-300
University of Turin	Italy	201-300
University of Valencia	Spain	201-300
University of Wollongong	Australia	201-300
University of York	UK	201-300
Virginia Polytechnic Institute and State University	USA	201-300
Western University	Canada	201-300
Xiamen University	China	201-300
Aalborg University	Denmark	301-400
Brandeis University	USA	301-400
Chalmers University of Technology	Sweden	301-400
China Agricultural University	China	301-400
China University of Geosciences (Wuhan)	China	301-400
East China University of Science and Technology	China	301-400
Ecole Normale Supérieure - Lyon	France	301-400
Griffith University	Australia	301-400
Indiana University-Purdue University at Indianapolis	USA	301-400
Keio University	Japan	301-400
Kyung Hee University	South Korea	301-400
La Trobe University	Australia	301-400

Institution	Country/Region	Word Rank
National Cheng Kung University	China-tw	301-400
Northeastern University (Shenyang)	China	301-400
Polytechnic University of Valencia	Spain	301-400
Queensland University of Technology	Australia	301-400
Saint Petersburg State University	Russia	301-400
Temple University	USA	301-400
The George Washington University	USA	301-400
The Hong Kong University of Science and Technology	China-hk	301-400
The University of New Mexico - Albuquerque	USA	301-400
The University of Newcastle, Australia	Australia	301-400
University at Buffalo, the State University of New York	USA	301-400
University of Antwerp	Belgium	301-400
University of Bath	UK	301-400
University of Bergen	Norway	301-400
University of Campinas	Brazil	301-400
University of Central Florida	USA	301-400
University of Hawaii at Manoa	USA	301-400
University of Notre Dame	USA	301-400
University of Otago	New Zealand	301-400
University of Porto	Portugal	301-400
University of Southern Denmark	Denmark	301-400
University of St Andrews	UK	301-400
University of Surrey	UK	301-400
University of Tehran	Iran	301-400
University of the Basque Country	Spain	301-400
University of Turku	Finland	301-400
University of Ulm	Germany	301-400
University of Vermont	USA	301-400
University of Victoria	Canada	301-400
University of Warsaw	Poland	301-400
Vrije Universiteit Brussel (VUB)	Belgium	301-400
Washington State University	USA	301-400
Wuhan University of Technology	China	301-400
Zhengzhou University	China	301-400
Aalto University	Finland	401-500
Bar-Ilan University	Israel	401-500
Beijing Jiaotong University	China	401-500
Beijing University of Technology	China	401-500

Institution	Country/Region	Word Rank
Cairo University	Egypt	401-500
Chiba University	Japan	401-500
China University of Mining and Technology - Xuzhou	China	401-500
East China Normal University	China	401-500
Federal University of Minas Gerais	Brazil	401-500
Federal University of Rio Grande do Sul	Brazil	401-500
Flinders University	Australia	401-500
Florida International University	USA	401-500
Fuzhou University	China	401-500
Istanbul University	Turkey	401-500
Jagiellonian University	Poland	401-500
Kobe University	Japan	401-500
Mahidol University	Thailand	401-500
Nanjing University of Information Science & Technology	China	401-500
National Chiao Tung University	China-tw	401-500
National Tsing Hua University	China-tw	401-500
Queen's University Belfast	UK	401-500
Scuola Normale Superiore - Pisa	Italy	401-500
Shandong University of Science and Technology	China	401-500
Stellenbosch University	South Africa	401-500
Tokyo University of Science	Japan	401-500
University College Cork	Ireland	401-500
University of California-Merced	USA	401-500
University of Canterbury	New Zealand	401-500
University of Chile	Chile	401-500
University of Graz	Austria	401-500
University of Minho	Portugal	401-500
University of Pavia	Italy	401-500
University of Pretoria	South Africa	401-500
University of Seville	Spain	401-500
University of Zagreb	Croatia	401-500
University of Zaragoza	Spain	401-500
Victoria University of Wellington	New Zealand	401-500
West Virginia University	USA	401-500
Xidian University	China	401-500
York University	Canada	401-500
Adam Mickiewicz University	Poland	501-1000
Aristotle University of Thessaloniki	Greece	501-1000

Institution	Country/Region	Word Rank
Auburn University	USA	501-1000
Baylor University	USA	501-1000
Bielefeld University	Germany	501-1000
Bilkent University	Turkey	501-1000
Carlos III University of Madrid	Spain	501-1000
Chang Gung University	China-tw	501-1000
Chang'an University	China	501-1000
China University of Petroleum - Beijing	China	501-1000
Chonbuk National University	South Korea	501-1000
College of William and Mary	USA	501-1000
Colorado School of Mines	USA	501-1000
Concordia University	Canada	501-1000
Donghua University	China	501-1000
Ewha Womans University	South Korea	501-1000
Federal University of Viçosa	Brazil	501-1000
Gazi University	Turkey	501-1000
Gdansk University of Technology	Poland	501-1000
Gifu University	Japan	501-1000
Graz University of Technology	Austria	501-1000
Guangxi University	China	501-1000
Heriot-Watt University	UK	501-1000
Hiroshima University	Japan	501-1000
Hohai University	China	501-1000
Hong Kong Baptist University	China-hk	501-1000
HSE University	Russia	501-1000
Huaqiao University	China	501-1000
Hunan Normal University	China	501-1000
Indian Institute of Science	India	501-1000
Iran University of Science & Technology	Iran	501-1000
Isfahan University of Technology	Iran	501-1000
Istanbul Technical University	Turkey	501-1000
Kanazawa University	Japan	501-1000
Kaohsiung Medical University	China-tw	501-1000
Kazan (Volga region) Federal University	Russia	501-1000
Kumamoto University	Japan	501-1000
Lehigh University	USA	501-1000
Leibniz University Hannover	Germany	501-1000
Macau University of Science and Technology	China-mc	501-1000

Institution	Country/Region	Word Rank
Masaryk University	Czech	501-1000
Massey University	New Zealand	501-1000
Memorial University of Newfoundland	Canada	501-1000
Middle East Technical University	Turkey	501-1000
Miguel Hernandez University of Elche	Spain	501-1000
Montana State University - Bozeman	USA	501-1000
Murdoch University	Australia	501-1000
Nagasaki University	Japan	501-1000
National Central University	China-tw	501-1000
National Chung Hsing University	China-tw	501-1000
National Research Nuclear University MEPhI	Russia	501-1000
National Sun Yat-Sen University	China-tw	501-1000
National Taiwan Normal University	China-tw	501-1000
National Taiwan University of Science and Technology	China-tw	501-1000
Ningbo University	China	501-1000
North China Electric Power University	China	501-1000
Northeast Normal University	China	501-1000
Northern Arizona University	USA	501-1000
Novosibirsk State University	Russia	501-1000
Osaka City University	Japan	501-1000
Palacký University Olomouc	Czech	501-1000
Polytechnic University of Turin	Italy	501-1000
Pontifical Catholic University of Chile	Chile	501-1000
Sharif University of Technology	Iran	501-1000
Shinshu University	Japan	501-1000
Sogang University	South Korea	501-1000
Syracuse University	USA	501-1000
Taipei Medical University	China-tw	501-1000
Technical University of Catalonia	Spain	501-1000
The Graduate University for Advanced Studies	Japan	501-1000
The University of Texas at San Antonio	USA	501-1000
The University of Tokushima	Japan	501-1000
The University of Waikato	New Zealand	501-1000
Tokyo Metropolitan University	Japan	501-1000
Tulane University	USA	501-1000
Universidad De Cadiz	Spain	501-1000
Università Della Svizzera Italiana	Switzerland	501-1000
University of Alcalá	Spain	501-1000

Institution	Country/Region	Word Rank
University of Alicante	Spain	501-1000
University of Arkansas at Fayetteville	USA	501-1000
University of Aveiro	Portugal	501-1000
University of Bayreuth	Germany	501-1000
University of Bremen	Germany	501-1000
University of Calabria	Italy	501-1000
University of Cantabria	Spain	501-1000
University of Coimbra	Portugal	501-1000
University of Concepcion	Chile	501-1000
University of Costa Rica	Costa Rica	501-1000
University of Crete	Greece	501-1000
University of Debrecen	Hungary	501-1000
University of Eastern Finland	Finland	501-1000
University of Essex	UK	501-1000
University of Ferrara	Italy	501-1000
University of Genoa	Italy	501-1000
University of Greenwich	UK	501-1000
University of Hohenheim	Germany	501-1000
University of Iceland	Iceland	501-1000
University of Jyvaskyla	Finland	501-1000
University of Konstanz	Germany	501-1000
University of KwaZulu-Natal	South Africa	501-1000
University of Ljubljana	Slovenia	501-1000
University of Macau	China-mc	501-1000
University of Magdeburg	Germany	501-1000
University of Murcia	Spain	501-1000
University of Navarra	Spain	501-1000
University of Nebraska Medical Center	USA	501-1000
University of Parma	Italy	501-1000
University of Plymouth	UK	501-1000
University of Portsmouth	UK	501-1000
University of Salamanca	Spain	501-1000
University of Salerno	Italy	501-1000
University of Tabriz	Iran	501-1000
University of the Balearic Islands	Spain	501-1000
University of Trieste	Italy	501-1000
University of Valladolid	Spain	501-1000
University of Vigo	Spain	501-1000

Institution	Country/Region	Word Rank
University of Wisconsin-Milwaukee	USA	501-1000
University Paris Est Creteil	France	501-1000
University Rovira i Virgili	Spain	501-1000
Vellore Institute of Technology	India	501-1000
Warsaw University of Technology	Poland	501-1000
Worcester Polytechnic Institute	USA	501-1000
Yangzhou University	China	501-1000
Yanshan University	China	501-1000
Yokohama City University	Japan	501-1000
Zhejiang Sci-Tech University	China	501-1000
Athens University of Economics and Business	Greece	1000+
Beijing Technology and Business University	China	1000+
Belarusian State University	Belarus	1000+
Bogazici University	Turkey	1000+
Ca' Foscari University of Venice	Italy	1000+
Central European University	Hungary	1000+
Changshu Institute of Technology	China	1000+
Charles Darwin University	Australia	1000+
Chengdu University of Information Technology	China	1000+
China Three Gorges University	China	1000+
Chung Shan Medical University	China-tw	1000+
Chung Yuan Christian University	China-tw	1000+
Cyprus University of Technology	Cyprus	1000+
Dalian Maritime University	China	1000+
Dalian University	China	1000+
Duy Tan University	Vietnam	1000+
East China University of Technology	China	1000+
Feng Chia University	China-tw	1000+
Florida Institute of Technology	USA	1000+
Hebei University	China	1000+
Henan University of Science and Technology	China	1000+
I Shou University	China-tw	1000+
Inner Mongolia University for Nationalities	China	1000+
Jamia Millia Islamia	India	1000+
Jiangsu University of Science and Technology	China	1000+
Kyoto Institute of Technology	Japan	1000+
Kyoto Sangyo University	Japan	1000+
Kyushu Institute of Technology	Japan	1000+

Institution	Country/Region	Word Rank
Manchester Metropolitan University	UK	1000+
Metropolitan Autonomous University	Mexico	1000+
Monterrey Institute of Technology and Higher Education	Mexico	1000+
National Dong Hwa University	China-tw	1000+
National Taipei University of Technology	China-tw	1000+
National Taiwan Ocean University	China-tw	1000+
National Yunlin University of Science and Technology	China-tw	1000+
North University of China	China	1000+
Osaka Prefecture University	Japan	1000+
Pantheon-Sorbonne University (Paris 1)	France	1000+
Polytechnic University of Bucharest	Romania	1000+
Qijing Normal University	China	1000+
Roma Tre University	Italy	1000+
Shaanxi University of Science and Technology	China	1000+
Shahrekord University	Iran	1000+
Shandong University of Finance and Economics	China	1000+
Shanghai Maritime University	China	1000+
Shenyang Normal University	China	1000+
Silesian University of Technology	Poland	1000+
Southwest University of Science and Technology	China	1000+
Tamkang University	China-tw	1000+
Taras Shevchenko National University of Kyiv	Ukraine	1000+
Texas Christian University	USA	1000+
Texas State University-San Marcos	USA	1000+
The New School	USA	1000+
Toyohashi University of Technology	Japan	1000+
Universite De Carthage	Tunisia	1000+
University of Bucharest	Romania	1000+
University of Central Lancashire	UK	1000+
University of International Business and Economics	China	1000+
University of Kaiserslautern	Germany	1000+
University of Los Andes (Colombia)	Colombia	1000+
University of Maribor	Slovenia	1000+
University of Massachusetts-Dartmouth	USA	1000+
University of Patras	Greece	1000+
University of Silesia in Katowice	Poland	1000+
V. N. Karazin Kharkiv National University	Ukraine	1000+
Voronezh State University	Russia	1000+

Institution	Country/Region	Word Rank
Wuhan University of Science and Technology	China	1000+
Xiamen University of Technology	China	1000+
Xi'an Jiaotong-Liverpool University	China	1000+
Yanbian University	China	1000+
Yangtze Normal University	China	1000+
Zhejiang Ocean University	China	1000+
Air University	Pakistan	/
Al- Ahliyya Amman University	Jordan	/
Amrita University	India	/
Chaoyang University of Technology	China-tw	/
City University of Macau	China-mc	/
Dunarea de Jos University of Galati	Romania	/
Free University Berlin	Germany	/
Huzhou University	China	/
Huzhou University Qiuzhen College	China	/
Ivan Franko National University of Lviv	Ukraine	/
National Technical University of Ukraine	Ukraine	/
National Univerity of Architecture and Construction of Armenia	Russia	/
Ningbo University of Technology	China	/
Northern Technical University	Iraqi	/
Shanxi University of Finance and Economics	China	/
Sumy State University	Ukraine	/
University of Zilina	Slovakia	/
Voronezh State Technical University	Russia	/
Zhejiang University Ningbo Institute of Technology	China	/

**** Institutions within the same rank range are listed alphabetically.***



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