



# ACADEMIC RANKING OF WORLD UNIVERSITIES

# 2019



# About ARWU

The Academic Ranking of World Universities (ARWU) was first published in June 2003 by the Center for World-Class Universities (CWCU), Graduate School of Education (formerly the Institute of Higher Education) of Shanghai Jiao Tong University, China, and updated on an annual basis. Since 2009 the Academic Ranking of World Universities (ARWU) has been published and copyrighted by ShanghaiRanking Consultancy. ShanghaiRanking Consultancy is a fully independent organization dedicating to research on higher education intelligence and consultation.

ARWU uses six objective indicators to rank world universities, including the number of alumni and staff winning Nobel Prizes and Fields Medals, number of highly cited researchers selected by Clarivate Analytics, number of articles published in journals of *Nature* and *Science*, number of articles indexed in Science Citation Index - Expanded and Social Sciences Citation Index, and per capita performance of a university. In total, more than 1800 universities are actually ranked and the best 1000 are published.

Although the initial purpose of ARWU was to find the global standing of top Chinese universities, it has attracted a great deal of attention from universities, governments and public media worldwide. ARWU has been reported by mainstream media in almost all major countries. Hundreds of universities cited the ranking results in their campus news, annual reports or promotional brochures. A survey on higher education published by The Economist in 2005 commented ARWU as "the most widely used annual ranking of the world's research universities". Burton Bollag, a reporter at Chronicle of Higher Education wrote that ARWU "is considered the most influential international ranking".

One of the factors for the significant influence of ARWU is that its methodology is scientifically sound, stable and transparent. The EU Research Headlines reported ARWU work on 31st December 2003: "The universities were carefully evaluated using several indicators of research performance." Chancellor of Oxford University, Chris Patten, said "it looks like a pretty good stab at a fair comparison." Professor Simon Marginson of Institute of Education, University of London commented that one of the strengths of "the academically rigorous and globally inclusive Jiao Tong approach" is "constantly tuning its rankings and invites open collaboration in that".

ARWU and its content have been widely cited and employed as a starting point for identifying national strengths and weaknesses as well as facilitating reform and setting new initiatives. Bill Destler, the President of the Rochester Institute of Technology, drew reference to ARWU to analyze the comparative advantages that the Western Europe and US have in terms of intellectual talent and creativity in his publication in the journal *Nature*. Martin Enserink referred to ARWU and argued in his paper published in *Science* that "France's poor showing in the Shanghai ranking ... helped trigger a national debate about higher education that resulted in a new law... giving universities more freedom".

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**Academic Ranking of  
World Universities  
TOP 500**

**2019**























**Academic Ranking of  
World Universities  
501-1000**

**2019**

501-1000















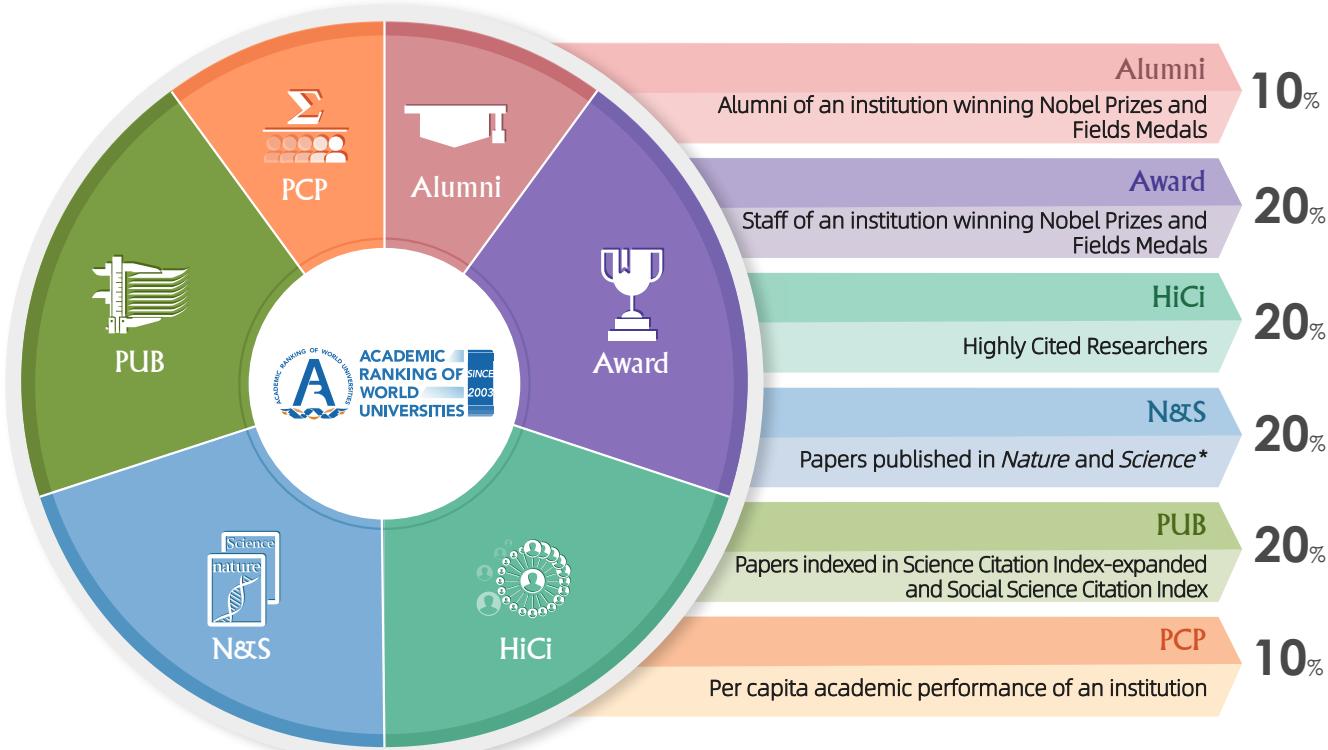




## WORLD 501-1000 UNIVERSITIES

World Rank 2019	World Rank 2018	Institution*	Country / Region	National / Regional Rank	Score on Alumni	Score on Award	Score on HiCi	Score on N&S	Score on PUB	Score on PCP
901-1000	801-900	Nihon University	JP	34-43	0.0	0.0	0.0	4.2	24.9	8.3
901-1000		Northumbria University	UK	56-61	0.0	0.0	0.0	1.5	23.7	11.5
901-1000	801-900	Rio de Janeiro State University	BR	19-23	0.0	0.0	0.0	2.1	24.8	12.0
901-1000		Roma Tre University	IT	43-46	0.0	0.0	0.0	6.0	18.9	12.1
901-1000		Ryerson University	CA	27-28	0.0	0.0	0.0	0.0	25.2	13.0
901-1000	601-700	Semmelweis University	HU	4-5	0.0	0.0	0.0	4.2	22.8	11.2
901-1000		Shahid Beheshti University	IR	11-13	0.0	0.0	0.0	0.0	25.2	12.2
901-1000		Shandong Normal University	CN	121-132	0.0	0.0	0.0	0.0	27.8	9.7
901-1000	801-900	Shiraz University	IR	11-13	0.0	0.0	0.0	0.0	26.3	12.7
901-1000	901-1000	Shizuoka University	JP	34-43	0.0	0.0	0.0	2.9	21.9	13.2
901-1000	901-1000	Sofia University	BG	1	0.0	0.0	0.0	4.9	21.2	10.5
901-1000	801-900	Sogang University	KR	30-32	0.0	0.0	0.0	5.7	18.2	14.1
901-1000		Southern Cross University	AU	32-33	0.0	0.0	0.0	5.3	15.8	19.8
901-1000	901-1000	Toho University	JP	34-43	0.0	0.0	0.0	5.2	18.8	13.8
901-1000	601-700	Tokyo Metropolitan University	JP	34-43	0.0	0.0	0.0	4.2	21.9	12.6
901-1000		Ton Duc Thang University	VN	1	0.0	0.0	0.0	0.0	25.4	12.3
901-1000	801-900	Union College	US	193-206	15.9	0.0	0.0	1.5	6.5	29.6
901-1000	901-1000	Universidade Federal de Mato Grosso do Sul	BR	19-23	0.0	0.0	0.0	2.5	24.4	11.9
901-1000	801-900	University of Alcalá	ES	37-38	0.0	0.0	0.0	4.8	22.0	13.0
901-1000		University of Angers	FR	33-35	0.0	0.0	0.0	2.7	21.9	13.7
901-1000	801-900	University of Bucharest	RO	2	7.9	0.0	0.0	2.5	19.8	10.0
901-1000	901-1000	University of Chieti-Pescara	IT	43-46	0.0	0.0	0.0	1.5	22.0	16.0
901-1000	901-1000	University of Debrecen	HU	4-5	0.0	0.0	0.0	3.4	23.3	11.4
901-1000	801-900	University of Denver	US	193-206	0.0	0.0	0.0	4.4	21.1	13.7
901-1000	601-700	University of Hull	UK	56-61	0.0	0.0	0.0	3.4	21.2	14.7
901-1000		University of Ibadan	NG	1	0.0	0.0	7.3	1.5	17.7	9.3
901-1000	801-900	University of Insubria	IT	43-46	0.0	0.0	0.0	4.8	18.5	18.1
901-1000		University of Las Palmas de Gran Canaria	ES	37-38	0.0	0.0	7.3	1.5	18.3	12.2
901-1000	901-1000	University of Los Andes (Colombia)	CO	2	0.0	0.0	0.0	6.2	19.6	10.0
901-1000	901-1000	University of Massachusetts Boston	US	193-206	0.0	0.0	0.0	3.9	20.9	14.2
901-1000	801-900	University of Mons	BE	9	0.0	0.0	0.0	5.2	15.8	21.0
901-1000	601-700	University of Neuchatel	CH	10	0.0	0.0	0.0	6.4	16.3	20.6
901-1000	601-700	University of New Orleans	US	193-206	0.0	0.0	12.7	0.0	9.8	16.7
901-1000	901-1000	University of North Carolina at Charlotte	US	193-206	0.0	0.0	0.0	2.5	23.5	13.0
901-1000	901-1000	University of Novi Sad	RS	2	0.0	0.0	0.0	0.0	25.8	12.5
901-1000	901-1000	University of Patras	GR	6-7	0.0	0.0	0.0	2.1	23.5	11.4
901-1000	801-900	University of Salento	IT	43-46	0.0	0.0	0.0	3.6	21.2	16.9
901-1000	901-1000	University of Salzburg	AT	12	0.0	0.0	0.0	2.5	20.5	17.3
901-1000	901-1000	University of South Bohemia	CZ	6-7	0.0	0.0	0.0	4.4	18.4	19.3
901-1000	901-1000	University of Stirling	UK	56-61	0.0	0.0	0.0	3.3	21.1	16.2
901-1000	801-900	University of Tabriz	IR	11-13	0.0	0.0	0.0	0.0	26.4	12.8
901-1000		University of Thessaly	GR	6-7	0.0	0.0	7.3	1.5	18.5	9.6
901-1000	901-1000	University of Toyama	JP	34-43	0.0	0.0	0.0	7.1	19.2	10.5
901-1000	901-1000	University of Yamanashi	JP	34-43	11.2	0.0	0.0	2.5	16.7	13.8
901-1000		Vellore Institute of Technology	IN	11-16	0.0	0.0	0.0	0.0	26.3	12.7
901-1000	801-900	Williams College	US	193-206	18.6	0.0	0.0	5.1	10.2	16.4
901-1000	801-900	Worcester Polytechnic Institute	US	193-206	0.0	0.0	7.3	2.5	15.1	16.0
901-1000	901-1000	Wroclaw University of Technology	PL	7-9	0.0	0.0	0.0	1.5	23.8	11.6
901-1000		Yokohama National University	JP	34-43	0.0	0.0	7.3	1.5	17.7	12.6
901-1000		Zagazig University	EG	5	0.0	0.0	0.0	1.5	23.7	11.5

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



\* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.

# Ranking Methodology

## Candidate Universities

ARWU considers every university that has any Nobel Laureates, Fields Medalists, Highly Cited Researchers, or papers published in *Nature* or *Science*. In addition, universities with significant amount of papers indexed by Science Citation Index-Expanded (SCIE) and Social Science Citation Index (SSCI) are also included. In total, more than 1800 universities are actually ranked and the best 1000 are published.

## Ranking Criteria and Weights

Universities are ranked by several indicators of academic or research performance, including alumni and staff winning Nobel Prizes and Fields Medals, highly cited researchers,

papers published in *Nature* and *Science*, papers indexed in major citation indices, and the per capita academic performance of an institution. For each indicator, the highest scoring institution is assigned a score of 100, and other institutions are calculated as a percentage of the top score. The distribution of data for each indicator is examined for any significant distorting effect; standard statistical techniques are used to adjust the indicator if necessary. Scores for each indicator are weighted as shown below to arrive at a final overall score for an institution. The highest scoring institution is assigned a score of 100, and other institutions are calculated as a percentage of the top score. An institution's rank reflects the number of institutions that sit above it.

## Alumni



The total number of the alumni of an institution winning Nobel Prizes and Fields Medals. Alumni are defined as those who obtain bachelor's, master's or doctoral degrees from the institution. Different weights are set according to the periods of obtaining degrees. The weight is 100% for alumni obtaining degrees after 2011, 90% for alumni obtaining degrees in 2001-2010, 80% for alumni obtaining degrees in 1991-2000, and so on, and finally 10% for alumni obtaining degrees in 1921-1930. If a person obtains more than one degree from an institution, the institution is considered once only.

## N&S



The number of papers published in *Nature* and *Science* between 2014 and 2018. To distinguish the order of author affiliation, a weight of 100% is assigned for corresponding author affiliation, 50% for first author affiliation (second author affiliation if the first author affiliation is the same as corresponding author affiliation), 25% for the next author affiliation, and 10% for other author affiliations. When there are more than one corresponding author addresses, we consider the first corresponding author address as the corresponding author address and consider other corresponding author addresses as first author address, second author address etc. following the order of the author addresses. Only publications of 'Article' type is considered.

## Award



The total number of the staff of an institution winning Nobel Prizes in Physics, Chemistry, Medicine and Economics and Fields Medal in Mathematics. Staff is defined as those who work at an institution at the time of winning the prize. Different weights are set according to the periods of winning the prizes. The weight is 100% for winners after 2011, 90% for winners in 2001-2010, 80% for winners in 1991-2000, 70% for winners in 1981-1990, and so on, and finally 10% for winners in 1921-1930. If a winner is affiliated with more than one institution, each institution is assigned the reciprocal of the number of institutions. For Nobel prizes, if a prize is shared by more than one person, weights are set for winners according to their proportion of the prize.

## PUB



Total number of papers indexed in Science Citation Index-Expanded and Social Science Citation Index in 2018. Only publications of 'Article' type is considered. When calculating the total number of papers of an institution, a special weight of two was introduced for papers indexed in Social Science Citation Index.

## HiCi



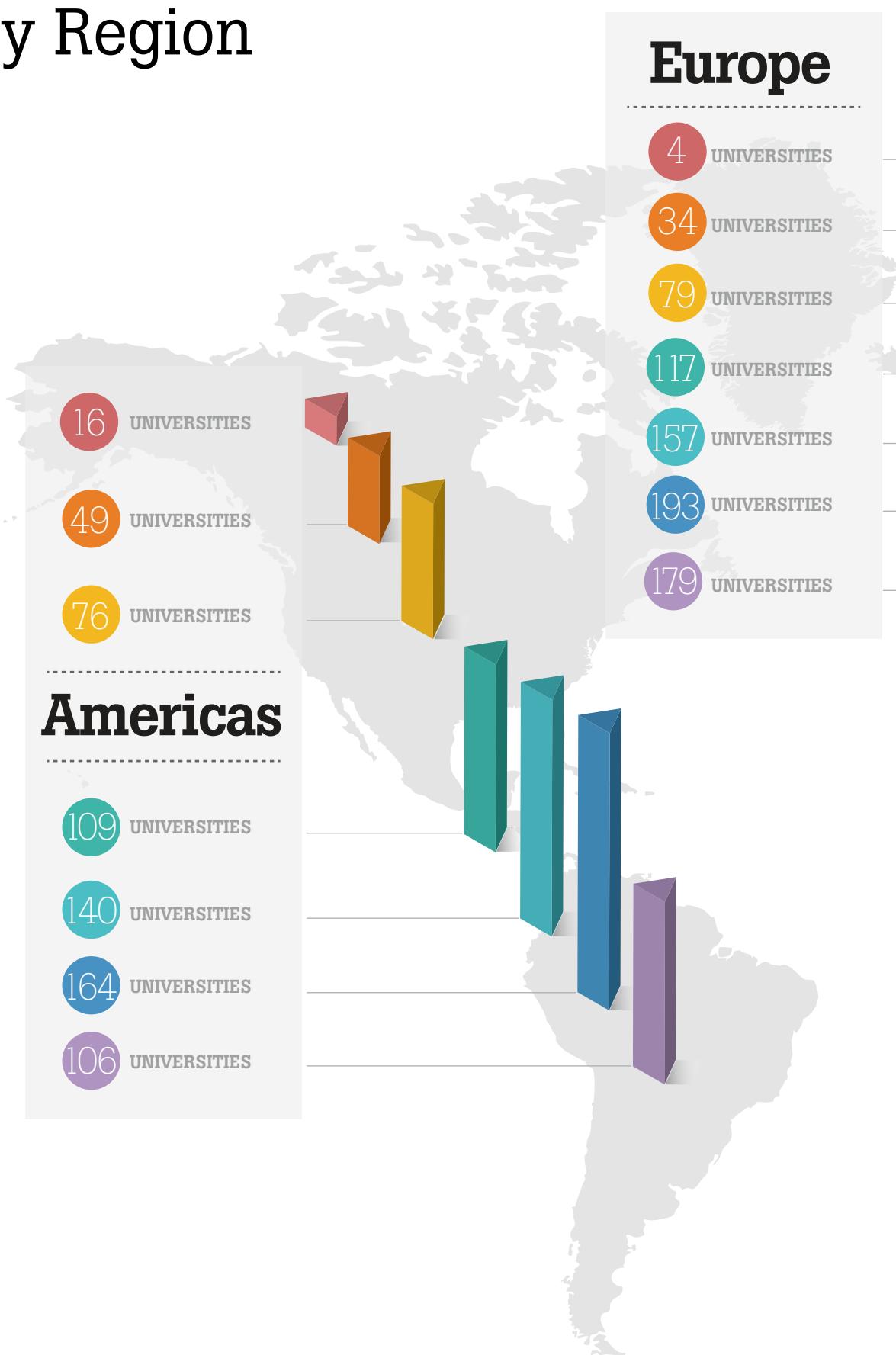
The number of Highly Cited Researchers selected by Clarivate Analytics. The Highly Cited Researchers list issued in December 2018 was used for the calculation of HiCi indicator in ARWU 2019. Only the primary affiliations of Highly Cited Researchers are considered.

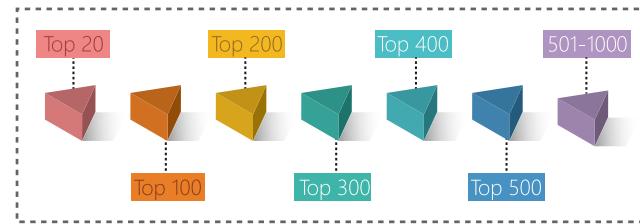
## PCP



The weighted scores of the above five indicators divided by the number of full-time equivalent academic staff. If the number of academic staff for institutions of a country cannot be obtained, the weighted scores of the above five indicators is used. For ARWU 2019, the numbers of full-time equivalent academic staff are obtained for institutions in USA, UK, France, Canada, Japan, Italy, China, Australia, Netherlands, Sweden, Switzerland, Belgium, South Korea, Czech, Slovenia, New Zealand etc.

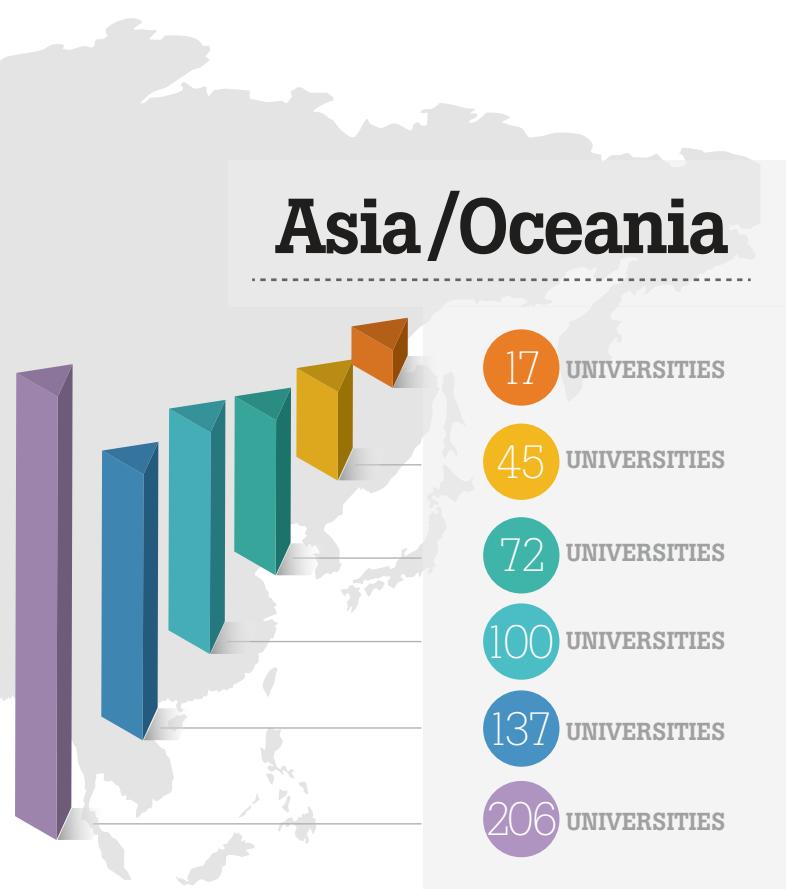
# Number of Top Universities by Region





## Africa

- 2 UNIVERSITIES
- 3 UNIVERSITIES
- 6 UNIVERSITIES
- 9 UNIVERSITIES



# Number of Top Universities by Country

<b>Country</b>	<b>Top 20</b>	<b>Top 100</b>	<b>Top 200</b>	<b>Top 300</b>	<b>Top 400</b>	<b>Top 500</b>	<b>501-1000</b>
United States	16	45	66	94	116	137	69
United Kingdom	3	8	21	26	34	36	25
Switzerland	1	5	7	7	7	8	2
Australia	0	7	8	15	21	23	10
China	0	4	20	33	47	66	88
China-Mainland	0	4	17	27	39	58	74
China-Hong Kong	0	0	2	5	5	5	2
China-Taiwan	0	0	1	1	3	3	10
China-Macau	0	0	0	0	0	0	2
Germany	0	4	10	21	27	30	21
Canada	0	4	9	12	18	18	10
Netherlands	0	4	9	10	11	12	1
France	0	3	9	13	19	21	14
Japan	0	3	7	9	10	14	29
Sweden	0	3	5	6	9	11	2
Belgium	0	2	4	7	7	7	2
Denmark	0	2	3	4	5	5	1
Singapore	0	2	2	2	2	2	1
Israel	0	1	4	4	4	6	1
Norway	0	1	2	2	3	3	3
Finland	0	1	1	1	4	5	3
Russia	0	1	1	1	2	4	7
Italy	0	0	3	8	10	16	30
South Korea	0	0	2	5	8	11	21
Saudi Arabia	0	0	2	3	3	4	0
Spain	0	0	1	5	7	13	25
Austria	0	0	1	3	4	6	6
Brazil	0	0	1	1	4	6	17
Portugal	0	0	1	1	2	4	2
Ireland	0	0	1	1	2	3	2
South Africa	0	0	0	2	2	5	3
New Zealand	0	0	0	1	3	4	4
Czech Republic	0	0	0	1	1	1	6
Argentina	0	0	0	1	1	1	2
Mexico	0	0	0	1	1	1	1
Iran	0	0	0	0	1	3	10
Poland	0	0	0	0	1	2	7
Greece	0	0	0	0	1	2	5
Egypt	0	0	0	0	1	1	4
Malaysia	0	0	0	0	1	1	4
Estonia	0	0	0	0	1	1	0
India	0	0	0	0	0	1	15
Turkey	0	0	0	0	0	1	11
Chile	0	0	0	0	0	1	4
Thailand	0	0	0	0	0	1	3
Croatia	0	0	0	0	0	1	1
Serbia	0	0	0	0	0	1	1
Iceland	0	0	0	0	0	1	0
Hungary	0	0	0	0	0	0	5
Pakistan	0	0	0	0	0	0	4
Colombia	0	0	0	0	0	0	2
Romania	0	0	0	0	0	0	2
Slovenia	0	0	0	0	0	0	2
Bulgaria	0	0	0	0	0	0	1
Cyprus	0	0	0	0	0	0	1
Lebanon	0	0	0	0	0	0	1
Lithuania	0	0	0	0	0	0	1
Luxembourg	0	0	0	0	0	0	1
Nigeria	0	0	0	0	0	0	1
Oman	0	0	0	0	0	0	1
Slovakia	0	0	0	0	0	0	1
Tunisia	0	0	0	0	0	0	1
United Arab Emirates	0	0	0	0	0	0	1
Uruguay	0	0	0	0	0	0	1
Vietnam	0	0	0	0	0	0	1
<b>Total</b>	<b>20</b>	<b>100</b>	<b>200</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>500</b>





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