

# US News Global Ranking of Subjects 2022–23

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*The performance of Indian higher educational institutions (HEIs) in the US News 2022–23 Best Global Universities Rankings and Subject Rankings shows that engineering and natural sciences constitute most of the country's research base. There are many areas in which no Indian school has distinguished itself.*

**Keywords:** Engineering, global rankings, higher educational institutions, natural sciences, research performance.

US News (<https://www.usnews.com/education/best-global-universities>) has now come out with the Best Global Universities Rankings and Subject Rankings in 47 subject areas for 2022–23. This can be compared with the 54 subjects covered by The Global Ranking of Academic Subjects (GRAS) of Shanghai Ranking Consultancy (SRC), which were covered in these pages earlier<sup>1,2</sup>. US News has a separate ranking of 2000 top universities, with 99 from India making it to the list. There are two rankings and two lists: one for subjects and one for best universities (top 2000). Only one (Tata Institute of Fundamental Research (TIFR), Mumbai, #1 in Best Universities in India and #452 in Best Global Universities) appeared in the top 500. In the corresponding SRC Rankings 2022, only one institution from India (Indian Institute of Science (IISc), Bengaluru) appeared in the 301–400 band and none in the 401–500 band. The prescient editorial comment in these pages that ‘the best of Indian institutions does not compare well on an international scale’<sup>3</sup> and that none of the ‘real’ universities found a place in this top list<sup>4</sup> still ring true.

In this study, we shall restrict attention to the 47 subject areas, slightly different from the taxonomy used in the Shanghai Rankings. For example, Arts and Humanities appear in the former, but not in the latter. Economics and Business is a single area in the US News list but appears as three separate categories (Economics, Business Administration and Public Administration) in the Shanghai list. Since US News reports two separate studies (Global Universities Rankings and Subject Rankings), we find that some institutions from India in one list will not appear in the other. So, we will have to navigate this carefully.

The US News rankings rely heavily on bibliometric data based on the Web of Science and metrics provided by Clarivate. Like all other ranking exercises, US News used a

multivariable methodology and weighting schemes they had developed for this purpose.

## Results and discussion

We shall slightly modify our earlier approach<sup>1,2</sup> and now curate lists of India's presence in 2022–23 Best Global Universities Rankings and the corresponding Subject Rankings. There are 2165 schools globally from 95 countries in the Subjects Rankings list, of which 99 are from India. Of this, 81 schools made it to the Best Universities Rankings. To put this number in perspective, it is a 4.1% share of the global total, slightly better than our economic share of the global GDP (approximately 3.5% of nominal GDP) but significantly smaller than the demographic share of the global population (approximately 18%). This also compares with India's share in the SRC Rankings of about 2.5% of the 1800 universities from 96 countries<sup>2</sup>. In total, 17,200 universities (schools) are ranked in 47 subjects in the 2022–23 rankings. This is possible because universities are counted as many times as they are ranked in each subject, and many schools appear in more than one subject. Each appearance counts separately in the overall number of universities ranked in the 47 subjects. Indian Institute of Technology (IIT) Delhi appears in 14 subjects. China is the top-performing country, with 338 universities, i.e. 16.9% of all the ranked schools. This is practically on par with their demographic weight.

Of the list of 99, we have extracted 18 schools which have a subject score and rank but do not have a global score or rank in the US News Rankings for 2022–23 (Table 1). These are all institutions with a strong focus restricted to certain subjects. The Mahatma Gandhi University, Kottayam, Kerala, stands out in the Indian list with a stellar performance in polymer science (subject score of 53.1 and a subject rank of 72). The highest score is normalized to 100. The Inter-University Centre for Astronomy and Astrophysics, Pune has done well in physics (score: 59.9, rank: 209) and space science (score: 48.8, rank: 111). The takeaway from this is that Mahatma Gandhi University should strengthen other faculties, and the Inter-University

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**Table 1.** List of 18 universities/schools which have a subject score and rank, but do not have a global score or rank in the US News Rankings for 2022–23

Subject	University/school	Subject score	Subject rank
Physics	Gauhati University, Guwahati	27.5	720
Engineering	Indian Institute of Technology (IIT), Ropar	29.6	879
Clinical medicine	Institute of Post Graduate Medical Education and Research, Kolkata	38.8	682
Physics	International Centre for Theoretical Sciences, Bengaluru	58.2	235
Physics	Inter-University Centre for Astronomy and Astrophysics, Pune	59.9	209
Space science	Inter-University Centre for Astronomy and Astrophysics, Pune	48.8	111
Chemistry	Jain University, Bengaluru	34.7	760
Clinical medicine	King George's Medical University, Lucknow	33.4	819
Chemistry	Madurai Kamaraj University, Madurai	43.2	522
Chemistry	Mahatma Gandhi University, Kottayam, Kerala	29.7	908
Polymer science	Mahatma Gandhi University, Kottayam, Kerala	53.1	72
Clinical medicine	Maulana Azad Medical College, New Delhi	28.9	950
Engineering	Maulana Azad National Institute of Technology, Bhopal	29.5	881
Electrical and electronics engineering	National Institute of Technology (NIT), Kurukshetra	28.0	487
Computer science	Netaji Subhas University of Technology, Delhi	15.0	734
Clinical medicine	Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow	54.1	348
Clinical medicine	Seth Gordhandas Sunderdas Medical College and King Edward Memorial Hospital, Mumbai	28.2	964
Physics	Shoolini University, Himachal Pradesh	33.4	634
Physics	University of Jammu, Jammu	35.6	604
Physics	University of Rajasthan, Jaipur	33.4	634

**Table 2.** List of 16 universities/schools which have a global score and rank, but do not have a subject score or rank in the US News Rankings for 2022–23

University/school	Global score	India rank	Global rank
Amity University, Noida	29.8	41	1413
Annamalai University, Chidambaram	24.6	55	1636
Birla Institute of Technology and Science, Mesra	16.2	73	1888
Cochin University of Science and Technology, Kochi	12.4	77	1950
Guru Nanak Dev University, Amritsar	21.1	63	1771
Indian Institute of Engineering Science and Technology, Shibpur	14.8	75	1915
IIT, Mandi	15.1	74	1908
Motilal Nehru National Institute of Technology, Allahabad	18.5	70	1835
NIT, Calicut	9.4	81	1980
Osmania University, Hyderabad	19	68	1821
Pondicherry University, Puducherry	27.5	47	1514
Punjabi University, Patiala	9.6	80	1976
Sathyabama Institute of Science and Technology, Chennai	10.9	78	1969
Siksha 'O' Anusandhan University, Bhubaneswar	14.5	76	1916
Tezpur University, Tezpur	9.9	79	1974
University of Kashmir, Srinagar	16.9	72	1878

Centre for Astronomy and Astrophysics should be embedded as part of a larger university while retaining its autonomy to do research. Only then will we find schools making it to the global 2000 list. This serves equally well for most universities and institutions from India that did not make it to the list and for those on the list who need to improve their rankings.

The obverse of the above is that we find another list of 16 schools which have global scores and ranks but do not appear in any of the 47 subject lists (Table 2). Clearly, no individual faculties in these schools have sufficient critical mass and quality to appear in the subject lists for their disciplines.

This leaves us with a list of 65 schools that appear in both lists (Table 3). In Tables 1–3, all the institutions are arranged alphabetically. In the Shanghai Rankings, IITs dominate this list. It is true here as well. Also, as in the recent Shanghai Rankings<sup>1,2</sup>, India's research base is hugely skewed toward engineering and natural sciences. In Table 4, we collect the 19 subject areas in which no school from India made the cut this year in the US News list. These are mainly in the Medical Sciences, Life Sciences and Social Sciences. Also shown are the 21 subject areas and fields in the Shanghai Rankings 2022, where India drew a blank.

IIT Delhi shows up in 14 subjects (Table 5). IISc, Bengaluru and IIT Bombay, Kharagpur and Madras appear in 13

**Table 3.** List of 65 universities/schools which have both a global score and rank and a subject score or rank in the US News Rankings for 2022–23

University/school	Global score	India rank	Global rank
Alagappa University	25.9	53	1585
Aligarh Muslim University	43.5	11	787
All India Institute of Medical Sciences, New Delhi	42.4	12	826
Amrita Vishwa Vidyapeetham	28.1	44	1483
Anna University, Chennai	31.0	36	1361
Banaras Hindu University (BHU), Varanasi	42.4	12	826
Bharathiar University	30.6	38	1376
Bharathidasan University	28.7	43	1455
Birla Institute of Technology and Science, Pilani	33.2	29	1254
Christian Medical College and Hospital, Vellore	43.9	10	770
Delhi Technological University	28.1	44	1483
Homi Bhabha National Institute	31.2	35	1354
Indian Institute of Science (IISc), Bengaluru	49.6	2	551
Indian Institute of Science Education and Research (IISER), Bhopal	26.2	52	1570
IISER, Kolkata	42.0	15	852
IISER, Mohali	24.6	55	1636
IISER, Pune	40.4	20	926
IIT BHU, Varanasi	32.3	32	1291
IIT, Bombay	48.7	3	583
IIT, Delhi	45.3	5	717
IIT, Gandhinagar	45.1	7	725
IIT, Guwahati	36.4	25	1106
IIT, Hyderabad	41.4	17	875
IIT, Indore	35.6	26	1140
IIT, Kanpur	41.3	18	879
IIT, Kharagpur	44.1	9	764
IIT, Madras	48.2	4	605
IIT, Patna	21.7	61	1746
IIT, Roorkee	41.0	19	896
IIT (Indian School of Mines), Dhanbad	27.7	46	1506
IIT, Bhubaneswar	30.3	40	1389
Indian Statistical Institute, Kolkata	31.3	34	1350
Institute of Chemical Technology, Mumbai	21.5	62	1753
Jadavpur University	34.6	28	1184
Jamia Hamdard University	30.9	37	1365
Jamia Millia Islamia	41.9	16	856
Jawaharlal Nehru University, New Delhi	36.8	24	1088
Kalinga Institute of Industrial Technology	20.4	64	1788
Lovely Professional University	24.5	57	1647
Malaviya National Institute of Technology, Jaipur	25.1	54	1617
Manipal Academy of Higher Education	38.1	22	1032
National Institute of Pharmaceutical Education and Research	26.6	51	1556
NIT, Durgapur	19.8	66	1805
NIT Karnataka, Suratkal	23.1	58	1694
NIT, Rourkela	31.7	33	1327
NIT, Silchar	19.1	67	1818
NIT, Tiruchirappalli	29.8	41	1413
NIT, Warangal	22.3	59	1726
Panjab University	44.2	8	759
Post Graduate Institute of Medical Education and Research, Chandigarh	37.4	23	1060
Punjab Agricultural University	18.0	71	1849
Sardar Vallabhbhai National Institute of Technology	22.0	60	1735
Savitribai Phule Pune University	26.8	50	1549
Shanmugha Arts, Science, Technology and Research Academy (SASTRA)	27.5	47	1514
Shivaji University	20.1	65	1798
SRM Institute of Science and Technology, Chennai	32.6	31	1281
Tata Institute of Fundamental Research	53.1	1	452
Thapar Institute of Engineering and Technology	38.8	21	997
University of Calcutta	30.6	38	1376
University of Delhi	45.3	5	717
University of Hyderabad	32.8	30	1271
University of Madras	26.9	49	1542
Vellore Institute of Technology	42.2	14	844
Visva Bharati University	34.7	27	1180
Visvesvaraya National Institute of Technology, Nagpur	19.0	68	1821

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**Table 4.** The 19 subject areas in which no institution from India made it to the US News Rankings. Also shown are the 21 subject areas and fields in the Shanghai Rankings 2022 where India drew a blank

US News 2022–23	Shanghai Rankings 2022	Field
	Aerospace engineering	Engineering
	Biomedical engineering	Engineering
Environment/ecology	Environmental science and engineering	Engineering
Food science and technology		Engineering
	Remote sensing	Engineering
Water resources		Engineering
	Geography	Natural sciences
Meteorology and atmospheric sciences		Natural sciences
	Statistics	Natural sciences
	Agricultural sciences	Life sciences
Cell biology		Life sciences
	Human biological sciences	Life sciences
Microbiology		Life sciences
Cardiac and cardiovascular systems		Medical sciences
	Dentistry and oral sciences	Medical sciences
Endocrinology and metabolism		Medical sciences
Gastroenterology and hepatology		Medical sciences
Immunology		Medical sciences
Infectious diseases		Medical sciences
	Nursing	Medical sciences
Oncology		Medical sciences
		Medical sciences
Surgery		Medical sciences
	Communication	Social sciences
Economics and business	Economics	Social sciences
Education and educational research	Education	Social sciences
	Finance	Social sciences
	Hospitality and tourism management	Social sciences
	Law	Social sciences
	Library and information science	Social sciences
	Political sciences	Social sciences
Psychiatry/psychology	Psychology	Social sciences
	Public administration	Social sciences
Public, environmental and occupational health		Social sciences
Social sciences and public health	Sociology	Social sciences
		Social sciences
Arts and humanities		

**Table 5.** The school to subject matrix showing the performance of five leading institutions from India

Subject area	IIT, Delhi	IISc, Bengaluru	IIT, Bombay	IIT, Kharagpur	IIT, Madras
Biology and biochemistry	X	X	X	X	X
Biotechnology and applied microbiology	X				
Chemical engineering			X	X	X
Chemistry	X	X	X	X	X
Civil engineering			X	X	X
Computer science	X	X	X	X	X
Condensed matter physics	X	X			
Electrical and electronics engineering	X	X	X	X	X
Energy and fuels	X		X		X
Engineering	X	X	X	X	X
Geosciences		X	X	X	
Materials science	X	X	X	X	X
Mathematics		X			X
Mechanical engineering	X	X	X	X	X
Nanoscience and nanotechnology		X			
Optics	X				
Physical chemistry	X	X	X	X	X
Physics	X	X	X	X	X
Polymer science	X			X	
19	14	13	13	13	13

subjects. Note that all five top institutions together account for only 19 of the 47 subject areas. These are entirely in the engineering and natural sciences. The complete matrix for all 99 schools is available with the author upon request.

### Conclusion

Thus, the data we curated from the US News Global Ranking of Universities are similar to those from the SRC Subject Rankings 2022 (refs 1, 2). The latest rankings confirm once again that India's research base is dominated by engineering and natural sciences.

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Received 31 March 2023; revised accepted 4 July 2023

doi: 10.18520/cs/v125/i7/743-747

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