METHODOLOGY FOR OVERALL AND SUBJECT RANKINGS FOR THE TIMES HIGHER EDUCATION WORLD UNIVERSITY RANKINGS 2024
September 2023
Times Higher Education World University Rankings:

Times Higher Education is the data provider underpinning university excellence in every continent across the world. As the company behind the world’s most influential university ranking, and with over five decades of experience as a source of analysis and insight on higher education, we have unparalleled expertise on the trends underpinning university performance globally. Our data and benchmarking tools are used by many of the world’s most prestigious universities to help them achieve their strategic goals.

The annual Times Higher Education (THE) World University Rankings (WUR), started in 2004, aims to provide the definitive list of the best universities. The new reiterated methodology, developed in 2023, evaluates this across five key areas of Teaching, Research Environment, Research Quality, International Outlook and Industry. Times Higher Education’s data is trusted by governments and universities and is a vital resource for students, helping them choose where to study.

Important links:


Directors’ Statement:

This document (the “Methodology”) sets out our end-to-end process for generating the THE World University Rankings 2024 (the “Rankings”). As directors and management of Times Higher Education, we state that we have followed our Methodology and correctly applied the specific procedures denoted by (i) - (xii) and marked with the symbol “Ω”.

Signed: Duncan Ross

Role: Chief Data Officer, Times Higher Education

Date: 20 September 2023

For and on behalf of THE World Universities Insights Limited
Summary of the Rankings methodology:

The Times Higher Education World University Rankings are the only global performance tables that judge research-intensive universities across all their core missions: teaching, research environment, research quality, international outlook and industry.

Since the rankings were launched 20 years ago, the methodology has been tweaked several times but altered substantially just once, in 2011. Those changes ensured that it remained robust as the global higher education landscape expanded and became more international. The 20th edition of the World University Rankings now sees another significant update to the methodology, so that it continues to reflect the outputs of the diverse range of research-intensive universities across the world, now and in the future.

The new methodology for this year’s rankings includes significant updates to that employed since the 2011 – 2012 tables and revised in 2015 – 2016. Notably, we are introducing a wider range of bibliometric measures, improving international metrics, and expanding the role for knowledge transfer.

We have moved from 13 to 18 carefully calibrated performance indicators to provide the most comprehensive and balanced comparisons, trusted by students, academics, university leaders, industry and governments.

The 2024 World University Rankings, published in Autumn 2023, are the first rankings to follow the new methodology.

The performance indicators are still grouped into five areas: Teaching (the learning environment); Research environment (volume, income and reputation); Research quality; International outlook (staff, students and research); and Industry (knowledge transfer):

- **Teaching**
  - Teaching Reputation
  - Student Staff Ratio
  - Doctorate Bachelor Ratio
  - Doctorate Staff Ratio
  - Institutional Income

- **Research Environment**
  - Research Reputation
  - Research Income
  - Research Productivity

- **Research Quality**
  - Citation Impact
  - Research Strength
  - Research Excellence
  - Research Influence

- **International outlook**
  - International Students
  - International Staff
  - International Co-authorship
  - (Studying Abroad*)

- **Industry**
  - Industry Income
  - Patents

* This metric is not used in the calculation for this year’s ranking.
1) Data collection and sources

Institutional data – self-submitted on the *THE* Portal*

*A named representative from each institution submits and authorises their institutional data for use in the Rankings* \(^\Omega^1\), via *THE*’s designated online portal, with confirmations that they have:

- Provided true and accurate information for their institution for the year ending in 2021 (in accordance with the definitions and exceptions below); and
- Understood and complied with the *THE* terms and conditions \(\rightarrow\) [https://www.timeshighereducation.com/terms-and-conditions](https://www.timeshighereducation.com/terms-and-conditions);

*Times Higher Education will not self-submit data for an institution without positive confirmation from the named representative of the institution.* \(^\Omega^\text{ii}\)

*Prior to submission of data within the portal, the draft data undergoes certain automatic validation checks to ensure that data is complete and accurate, for review by the named representative.* \(^\Omega^\text{iii}\)

*Only the data for UK institutions is provided to *THE* from HESA/JISC ([https://www.hesa.ac.uk/](https://www.hesa.ac.uk/)) and undergoes review by a named representative from each institution.*

For the purposes of the portal data collection, a “year ending in 2021” may be defined as any of the following:

- The calendar year January to December 2021
- The academic year that started in 2020 and ended in 2021
- The financial year that ended in 2021
- Any other appropriate annual cycle that the institution finds to best fit their data and ends in 2021

**Elsevier**

*Bibliometric data*

This year, our bibliometric data supplier Elsevier examined more than 134 million citations to 16.5 million journal articles, article reviews, conference proceedings, books and book chapters published over five years. The data includes more than 27,950 active peer-reviewed journals indexed by Elsevier’s Scopus database and all indexed publications between 2018 and 2022. Citations to these publications made in the six years from 2018 to 2023 are also collected.

The bibliometric measures help to show us how well each university is contributing to the sum of human knowledge: they tell us whose research has stood out, has been picked up and built on by other scholars and, most importantly, has been shared around the global scholarly community to expand the boundaries of human understanding, irrespective of discipline.

- The **Citation Impact** is a score per institution calculated by Elsevier from 2015 (until 2014 it was supplied by Web of Science). Elsevier provide the mean Field-Weighted Citation Impact (FWCI) score.

The FWCI score of a publication indicates how the number of citations received by the publication compares with the average number of citations received by all other similar publications. ‘Similar publications’ are understood to be publications in the Scopus database that have the same publication year, type, and discipline, as defined by the Scopus journal classification system (ASJC).

A FCWI of 1.00 indicates the global average across all publications.
The Citation Impact of an institution is the arithmetic mean of the eligible publications from the institution. It also blends equal measures of a country-adjusted and non-country-adjusted raw measure of citations scores. In 2015-2016 papers with more than 1,000 authors were excluded due to their disproportionate impact on the citation scores of the small number of universities. Since 2017 these papers have been reincorporated using a fractional counting approach to ensure that all universities where academics are authors of these papers will receive at least 5 per cent of the value of the paper. The institutions with the most contributors to the paper receive a proportionately larger contribution.

For territories or regions which cannot be country normalised by Elsevier, we have implemented a specific country normalisation. Since the publication of the WUR 2022, this includes Northern Cyprus. This is similar to the country normalisation by Elsevier, but the country average FWCI is estimated by the weighted sum of the FWCI from the Northern Cyprus universities which have met the publication threshold this year.

- **Research Strength** represents the 75th percentile FWCI of all papers published by an institution. Compared with Citation Impact, Research Strength provides an alternative view of the “average” research quality that is less susceptible to the effect of extremely highly cited publications. The 75th percentile FWCI scores of institutions are calculated by Elsevier, per subject and overall, and supplied to THE from 2023 onwards.

- **Research Excellence** is calculated as the number of publications within the top 10 per cent of all publications by FWCI, normalised by year, subject, and staff size of the institution. This measure is subject-weighted.

- **Research Influence** measures the level of thought leadership by considering how influential the citing papers are. It differs from the other FWCI-based measures as it examines not only the number of the citations, but also the “importance” of citing publications. This measure is subject weighted.

Research Excellence and Research Influence are calculated by THE based on the raw data supplied by Elsevier.

For the purposes of these 3 metrics, all publications, including those with over 1,000 authors, are counted as whole and no country normalisation is incorporated.

- We also collect for each institution the total number of publications, the total number of publications with international co-authorship, and the total number of publications that are cited by patents, by subject and overall. Full counting is also applied for the purpose of metrics that use these indicators and no form of country-normalisation is applied.

*Academic reputation survey*

A survey was sent to a sample of academics selected by THE, in which we ask them to nominate the universities that they perceive to be the best for Teaching and/or Research in their field. For the 2022 and 2023 surveys, academics were asked to nominate up to 15 institutions for Teaching and up to 15 institutions for Research globally.

The most recent Academic Reputation Survey (run annually and conducted by THE) that underpins this category was carried out between October 2022 and January 2023. We have run the survey to ensure a balanced spread of responses across disciplines and countries. Where disciplines or countries were over- or under-represented, THE’s data team weighted the responses to fully reflect the global distribution of scholars.

The 2023 data is combined with the results of the 2022 survey, giving over 900,000 votes to universities, with votes coming from more than 68,000 cited academics.

The Teaching and Research scores for an institution at the global level were the count of mentions they received in each category, weighted both to reflect the distribution of scholars across the world (using data from UNESCO) and the distribution of respondents by subject in the survey.

This year we have introduced a self-voting cap. This reduces the self-vote share to 10% of the total votes for any given university. Self-votes are still allowed and are included but are weighted down in much the same way as we apply country and subject weightings. The majority of ranked institutions are unaffected by this adjustment.
The academic reputation score for a university is the number of mentions they received for the 2022 and 2023 surveys in the global teaching and research sections. Where a university received no votes, they were allocated a zero score.

**Total reputation score for each university was calculated based on the aggregate of individual respondent data obtained.**

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**Reference data**

*THE* incorporates reference datasets into its model to convert country-level data provided by institutions via the portal (e.g. research income in a local currency) to a single comparable dataset for all institutions. We also use reference datasets to verify institutional data submissions.

The sources of this data are:

- The HM Revenue and Customs (HMRC) monthly datasets: [https://www.gov.uk/government/publications/hmrc-exchange-rates-for-2021-monthly](https://www.gov.uk/government/publications/hmrc-exchange-rates-for-2021-monthly), which provides accurate foreign exchange rates to convert datasets into GBP and then back into their local currency if an institution reports in a foreign currency;

- The World Bank Purchase Power Parity (PPP) dataset [http://data.worldbank.org/indicator/PA.NUS.PPP](http://data.worldbank.org/indicator/PA.NUS.PPP), which is used to convert the local currency to common-PPP-scaled USD. PPP is used to exemplify the differing currency strengths in each country while allowing for easy cross-country comparisons;


- The World Bank Population data: [https://data.worldbank.org/indicator/SP.POP.TOTL](https://data.worldbank.org/indicator/SP.POP.TOTL], which provides the total population per country;

- UNESCO data for reputation: [http://data.uis.unesco.org](http://data.uis.unesco.org], which provides the distribution of scholars across the world by country and subject; and

- External datasets corresponding to over 74 governmental and non-governmental sources for quality checking and verification of institutional data.
2) Criteria for exclusion, inclusion, and data processing

Exclusion and inclusion criteria

There are seven key criteria for universities to be included in the Rankings:

1. They are required to publish more than 1,000 relevant publications over the previous 5 years, and more than 150 relevant publications in any single year. This criterion was based on the publication count including kilo-authored fractional counting until the 2024 rankings, when we changed to the full publication count.

AND

2. They must teach at an undergraduate level, usually indicated by having more than zero undergraduate degrees awarded. Postgraduate-only institutions are therefore not in the ranking.

AND

3. They must not be focused on a single narrow subject area (more than 80% of their publication output is from one subject area).

AND

4. They must have supplied “overall” numbers for the ranking year.

AND

5. They must not have more than two of the critical values (academic staff, international academic staff, research staff, students, international students, outbound exchange students, undergraduate degrees awarded, doctorates awarded, institutional income, research income, research income from industry and commerce) as empty, unavailable, or withheld. Missing values will cause any metric based on that value to also be invalid.

AND

6. They must mark at least one subject as applicable. If no applicable subjects have been reported the institution is excluded.

AND

7. They must not be featured in the custom exclusions list. Institutions that have requested not to participate in the ranking or that are not eligible for other institution-specific reasons have been excluded.

*Universities meeting the seven key inclusion criteria are included in the rankings.* Ω

*Universities who have met criteria number 4, 6 and 7, but not all of the remaining criteria will not be included in the rankings. They will be listed as “Reporters” and they will not have any scores.*
Subject ranking criteria: Publication eligibility

For the eleven subject tables, there is an additional threshold within the subject for publications:

For the subjects that generate a high volume of publications:
- At least 500 publications over 2018 – 2022 for Clinical and Health, Computer Science, Engineering, Life Sciences, Physical Sciences;

For the subjects with lower volumes of publications:
- At least 250 publications over 2018 – 2022 for Arts and Humanities;
- At least 200 publications over 2018 – 2022 for Business and Economics, Social Sciences;
- At least 150 publications over 2018 – 2022 for Psychology;
- At least 100 publications over 2018 – 2022 for Education, Law.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Publications for 5 years (2018 – 2022)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>1000 (150 per year)</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>250</td>
</tr>
<tr>
<td>Business and Economics</td>
<td>200</td>
</tr>
<tr>
<td>Clinical and Health</td>
<td>500</td>
</tr>
<tr>
<td>Computer Science</td>
<td>500</td>
</tr>
<tr>
<td>Education</td>
<td>100</td>
</tr>
<tr>
<td>Engineering</td>
<td>500</td>
</tr>
<tr>
<td>Law</td>
<td>100</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>500</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>500</td>
</tr>
<tr>
<td>Psychology</td>
<td>150</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>200</td>
</tr>
</tbody>
</table>

Subject ranking criteria: Staff eligibility

We also expect an institution to either have at least a proportion of its academic staff in a discipline (4% for Engineering or Social Sciences, 1% for Computer Science, Psychology, Law or Education; 5% for other subjects), or an absolute number of staff threshold.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Proportion of academic staff</th>
<th>Absolute number of academic staff (FTE) in a given subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Humanities</td>
<td>5%</td>
<td>50</td>
</tr>
<tr>
<td>Business and Economics</td>
<td>5%</td>
<td>50</td>
</tr>
<tr>
<td>Clinical and Health</td>
<td>5%</td>
<td>50</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1%</td>
<td>20</td>
</tr>
<tr>
<td>Education</td>
<td>1%</td>
<td>20</td>
</tr>
<tr>
<td>Engineering</td>
<td>4%</td>
<td>40</td>
</tr>
<tr>
<td>Law</td>
<td>1%</td>
<td>20</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>5%</td>
<td>50</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>5%</td>
<td>50</td>
</tr>
<tr>
<td>Psychology</td>
<td>1%</td>
<td>20</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>4%</td>
<td>40</td>
</tr>
</tbody>
</table>
Data adjustments

After the deadline of the submission of data via the Portal by institutions, management review and approve all institution submissions data for appropriateness and accuracy, based on prior year values and gaps within datasets Ω as described below.

On the occasions where an institution does not provide a data point which would result in the inability to generate a metric, the missing metric may be calculated by imputing the value as the higher of:

- The average of the two lowest metric scores for an institution; or
- The minimum score awarded across the whole population for that metric.

Data processing pre-rankings

Data provided by institutions for financial information is converted into USD using international PPP exchange rates Ω (provided by the World Bank), for use in the Rankings calculation.

The datasets used in the rankings have been accurately mapped by university name and ID. Institution-level bibliometric (Scopus and/or SciVal) data obtained from Elsevier is mapped to THE institution data via THE’s institution ID. Ω
3) Calculation, scoring and ranking

Calculation of metrics

There are 18 indicators, each combined into 5 categories, or “pillars”, which are weighted according to relative importance. One of these (Study Abroad) has a zero weight.

**The pre-weighted indicators are calculated for each university** \( \Omega \) based on the definitions below:

1. **Teaching**

   **Teaching Reputation**
   - The most recent Academic Reputation Survey (run annually, this year conducted by THE) that underpins this category was carried out between October 2022 and January 2023. It examined the perceived prestige of institutions in teaching. This metric is the total number of votes obtained from the reputation survey from the last two years. Each year is calculated as the number of global teaching votes from respondents of the reputation survey, weighted by subject and country to be representative of the distribution of academics globally. Only non-zero values will be standardised using a logarithmic function, and universities that received no votes are scored a zero for this metric.

   **Student Staff Ratio**
   - The student staff ratio is defined as total full time equivalent (FTE) number of staff employed in an academic post divided by FTE number of students in all years and of all programmes that lead to a degree, certificate, university credit or other qualification. This variable is normalised after calculation.

   **Doctorate Bachelor Ratio**
   - This metric is generated by dividing the total number of doctorates awarded by the total number of undergraduate degrees awarded. This variable is normalised after calculation.

   **Doctorate Staff Ratio**
   - As well as giving a sense of how committed an institution is to nurturing the next generation of academics, a high proportion of postgraduate research students also suggests the provision of teaching at the highest level that is thus attractive to graduates and effective at developing them. This metric is generated by dividing the total subject weighted doctorates, by the total subject weighted number of academic staff. This metric takes into account an institution’s unique subject mix, reflecting that the volume of doctoral awards varies by discipline. This variable is normalised after calculation.

   **Institutional Income**
   - This measure of income indicates an institution’s general status and gives a broad sense of the infrastructure and facilities available to students and staff. This metric is generated by dividing the institutional income adjusted to PPP, by the total number of academic staff. This variable is normalised after calculation.
2. **Research Environment**

**Research Reputation**
- The most recent Academic Reputation Survey (run annually, this year conducted by THE) that underpins this category was carried out between October 2022 and January 2023. It examined the perceived prestige of institutions in research. This metric is the total number of votes obtained from the reputation survey from the last two years. Each year is calculated as the number of global research votes from respondents of the reputation survey, weighted by subject and country to be representative of the distribution of academics globally. Only non-zero values will be standardised using a logarithmic function, and universities that received no votes are scored a zero for this metric.

**Research Income**
- This metric is generated by dividing the total subject weighted research income adjusted for PPP, by the total subject weighted number of academic staff and is normalised after calculation. This is a somewhat controversial indicator because it can be influenced by national policy and economic circumstances. Income is crucial to the development of world-class research, and because much of it is subject to competition and judged by peer review, our experts suggested that it was a valid measure. This indicator takes account of each institution’s distinct subject profile, reflecting the fact that research grants in science subjects are often bigger than those awarded for the highest-quality social science, arts and humanities research.

**Research Productivity**
- This metric is generated by dividing the total subject weighted number of papers published in the academic journals indexed by Elsevier’s Scopus database per scholar, divided by the sum of the total subject weighted number of FTE research staff and FTE academic staff. This metric is normalised after calculation. The indicator gives a sense of the institution’s ability to get papers published in quality peer-reviewed journals. Introduced in the 2018 rankings, we devised a method to give credit for cross-subject research that results in papers being published in subjects where a university has no staff. For subjects where there are papers, but not staff, we will reassign the papers to subjects where there are staff. We will do this proportionally according to the number of staff in populated subjects, and according to the median publications per staff for populated subjects. We will have a maximum threshold of the proportion of papers that we are willing to reassign (10% of the total of papers).

3. **Research Quality**

**Citation Impact**
- Our research influence metric looks at universities’ role in spreading new knowledge and ideas. We examine research influence by capturing the average number of times a university’s published work is cited by scholars globally. We look at the academic journals indexed by Elsevier’s Scopus database and all indexed publications between 2018 and 2022. Citations to these publications made in the six years from 2018 to 2023 are also collected. The data is normalised by Elsevier to reflect variations in citation volume between different subject areas. This means that institutions with high levels of research activity in subjects with traditionally high citation counts do not gain an unfair advantage. We have blended equal measures of a country-adjusted and non-country-adjusted raw measure of citations scores.

**Research Strength**
- Our research strength metric measures the representative research quality based on the FWCI, but without being skewed by papers with an exceptionally high FWCI. It captures the 75th percentile of the Field-Weighted Citation Impact (FWCI) of all papers published by a university. We look at all Scopus-indexed publications between 2018 and 2022 and the corresponding citations to these publications made in the six years from 2018 to 2023 are also collected.
Research Excellence
   o This metric recognises the institution’s contribution to the best research in each subject and overall. Excellence is measured by capturing the total number of publications by an institution that are among the top 10% of publications worldwide by FWCI. We adjust this number by year, subject, and the total number of academic and research staff.

Research Influence
   o This metric analyses the influence of an entity’s publications by analysing their corresponding citations. The importance of a publication is determined based on the importance of other papers citing it. We adjust this number by year, subject, and the total number of academic and research staff.

4. International outlook
   
   International Students
   o This metric captures the proportion of international students on campus. International students are those whose nationality differs from the country where the institution is based. The metric is calculated as the total FTE number of international students divided by the total FTE number of students. This variable is normalised to account for the country population’s size.

   International Staff
   o This metric captures the proportion of international academic staff on campus. International staff are those whose nationality differs from the country where the institution is based. The metric is calculated as the total FTE number of international academic staff divided by the total FTE number of academic staff. This variable is normalised to account for the country population’s size.

   International Co-authorship
   o In the third international indicator, we calculate the proportion of an institution’s total research journal publications that have at least one international co-author. The metric is generated by dividing the total subject weighted number of publications with at least one international co-author by the total subjected weighted number of publications. This accounts for an institution’s subject mix. This variable is normalised to account for the country population’s size.

   Studying Abroad
   o Based on the number of outbound exchange students, this metric assesses international student mobility. The headcount number of exchange students going abroad is divided by the total FTE number of students. This metric is subject-weighted and adjusted by the country’s population. It has a zero weight for the 2024 ranking calculation.

5. Industry
   
   Industry Income
   o An institution’s ability to help industry with innovations, inventions and consultancy has become a core mission of the contemporary global academy. This category suggests the extent to which businesses are willing to pay for research and an institution’s ability to attract funding in the commercial marketplace – useful indicators of institutional quality. The indicator seeks to capture such knowledge-transfer activity by looking at how much research income an institution earns from industry (adjusted for PPP), divided by the total number of FTE academic staff it employs. This variable is normalised after calculation.
Normalisation

Moving from a series of specific data points to indicators, and finally to a total score for an institution, requires us to match values that represent fundamentally different data. To do this we use a standardisation approach for each indicator, and then combine the indicators in the proportions indicated below.

The standardisation approach we use is based on the distribution of data within a particular indicator, where we calculate a cumulative probability function, and evaluate where a particular institution’s indicator sits within that function.

For all metrics except the Academic Reputation Survey metrics, Research Excellence, Research Influence, and Patents, we calculate the cumulative probability function using a version of Z-scoring. The distribution of the data in these exceptional metrics requires us to use an exponential component.

**Patents**
- This metric recognises the extent to which universities are supporting their national economies through technology transfer. It measures the count of patents citing an entity’s published research. This measure is subject weighted to avoid penalising universities producing research in fields low in patents. We also normalise this by the sum of academic and research staff.
Weightings of metrics to final scores and rankings

The 18 performance metrics representing the five pillars are weighted according to THE’s assessment of relative importance.

The final population of universities and indicators has been prepared, the scores for each university are generated by weighting the metrics and the Final Rankings are calculated according to the following percentage breakdowns: Ω^x

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Metric</th>
<th>% weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teaching</td>
<td>Teaching Reputation</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Student Staff Ratio</td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td>Doctorate Bachelor Ratio</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Doctorate Staff ratio</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
<td>Institutional Income</td>
<td>2.5</td>
</tr>
<tr>
<td>2. Research Environment</td>
<td>Research Reputation</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td>Research Income</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
<td>Research Productivity</td>
<td>5.50</td>
</tr>
<tr>
<td>3. Research Quality</td>
<td>Citation Impact</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Research Strength</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Research Excellence</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Research Influence</td>
<td>5.00</td>
</tr>
<tr>
<td>4. International outlook</td>
<td>International Students</td>
<td>2.50</td>
</tr>
<tr>
<td></td>
<td>International Staff</td>
<td>2.50</td>
</tr>
<tr>
<td></td>
<td>International Co-authorship</td>
<td>2.50</td>
</tr>
<tr>
<td></td>
<td>Studying Abroad</td>
<td>0.00</td>
</tr>
<tr>
<td>5. Industry</td>
<td>Industry income</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Patents</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>
Subject ranking differentiation

The subject tables employ the same range of 18 performance indicators used in the overall World University Rankings, brought together with scores provided under the same five pillars:

- Teaching;
- Research Environment;
- Research Quality;
- International Outlook; and
- Industry.

However, within the subject rankings, the overall methodology is carefully recalibrated by subject, with the weightings changed to best suit the individual fields. In particular, those given to the research indicators have been altered to fit more closely the research culture in each subject, reflecting different publication habits: in arts and humanities, for instance, where the range of outputs extends well beyond peer-reviewed journals, we give less weight to paper citations.

Accordingly, the weight given to “citations: research influence” is halved from 15% in the overall rankings to just 7.5% for the arts and humanities. More weight is given to other research indicators, including the Academic Reputation Survey. For social sciences and law, where there is also less faith in the strength of citations alone as an indicator of research excellence, the measure’s weighting is reduced to 12.4%. It is also reduced for education, engineering and computer science to 13.7%.

By the same token, in those subjects where the vast majority of research outputs come through journal articles and where there are high levels of confidence in the strength of citations data, we have increased the weighting given to the research influence (up to 17.5% for the physical, life sciences, psychology and for the clinical and health tables).

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Overall</th>
<th>Arts and Humanities</th>
<th>Business and Economics</th>
<th>Clinical and Health</th>
<th>Computer Science</th>
<th>Educatio</th>
<th>Engineer</th>
<th>Law</th>
<th>Life Sciences</th>
<th>Physical Sciences</th>
<th>Psychology</th>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>t1 Teaching Reputation</td>
<td>15.00%</td>
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</table>
4) Publication and reporting

Final rankings preparation

All institutions were ranked overall and are published in the final rankings table on the THE website. On the website, the overall score and pillar scores are displayed.

Precise overall scores are shown for the institutions ranked in the top 200 overall. Banded overall scores are presented for the institutions ranked in bands (e.g. from 201 to 250. Precise individual pillar scores are displayed for each ranked institution.

For the institutions ranked 1 – 200 overall, an individual rank position is listed. The next institutions are assigned to the following bands: 201-250, 251-300, 301-350, 351-400, 401-500, 501-600, 601-800, 801-1000, 1001-1200, 1201-1500, 1501+.

Institutions with the ‘Reporter’ status appear at the end of the table, and they do not have any rank or scores.

We have considered the positions of Ukrainian universities in light of our published commitment. The steps taken towards that can be found on the World University Rankings 2024 table information. (Live from 27 September).

Review and sign off

The Rankings are formally signed off by THE World Universities Insights Limited management prior to being published in print and online.

*The Rankings results are reviewed and signed off by THE’s Chief Data Officer.*  Ωxi

Reporting

*The Rankings for the top 200 universities and banding allocation below top 200 are accurately reported on the THE website.*  Ωxii

The specific procedures for the Overall Rankings are located on the Times Higher Education website at: https://www.timeshighereducation.com/world-university-rankings/world-university-rankings-2024-methodology.
<table>
<thead>
<tr>
<th>Rule number</th>
<th>Methodology section</th>
<th>Rule description</th>
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<tr>
<td>(i)</td>
<td>Data collection and sources</td>
<td>A named representative from each institution submits and authorises their institutional data for use in the Rankings.</td>
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<tr>
<td>(ii)</td>
<td>Data collection and sources</td>
<td><em>Times Higher Education</em> will not self-submit data for an institution without positive confirmation from the named representative of the institution.</td>
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<tr>
<td>(iii)</td>
<td>Data collection and sources</td>
<td>Prior to submission of data within the portal, the draft data undergoes automatic validation checks reviewed by the named representative.</td>
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<td>(iv)</td>
<td>Criteria for exclusion, inclusion and data processing</td>
<td>Total reputation score for each university was calculated based on the aggregate of individual respondent data.</td>
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<td>(v)</td>
<td>Criteria for exclusion, inclusion and data processing</td>
<td>Universities meeting the seven key inclusion criteria are included in the rankings.</td>
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<td>(vi)</td>
<td>Criteria for exclusion, inclusion and data processing</td>
<td>Management review and approve all institution submissions data for appropriateness and accuracy, based on prior year values and gaps within datasets.</td>
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<td>(vii)</td>
<td>Criteria for exclusion, inclusion and data processing</td>
<td>Data provided by institutions for financial information is converted into USD using international PPP exchange rates.</td>
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<td>(viii)</td>
<td>Criteria for exclusion, inclusion and data processing</td>
<td>Institution-level bibliometric (Scopus and/or SciVal) obtained from Elsevier is mapped to <em>THE</em> institution data via <em>THE</em>’s institution ID.</td>
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<td>(ix)</td>
<td>Calculation, scoring and ranking</td>
<td>The pre-weighted indicators are calculated for each university.</td>
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<tr>
<td>(x)</td>
<td>Calculation, scoring and ranking</td>
<td>Once the final population of institutions and indicators has been prepared, the scores for each university are generated by weighting the metrics and the Final Rankings are calculated according to the following percentage breakdowns.</td>
</tr>
<tr>
<td>(xi)</td>
<td>Publication and reporting</td>
<td>The Rankings results are reviewed and signed off by <em>THE</em>’s Chief Data Officer.</td>
</tr>
<tr>
<td>(xii)</td>
<td>Publication and reporting</td>
<td>The Rankings for the top 200 universities and banding allocation below top 200 are accurately reported on the <em>THE</em> website. The ‘Reporters’ are listed at the end of the table.</td>
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