

Readymade Ranking Universities of Science and Technology

This readymade ranking compares universities of science and technology on a number of indicators selected by the Conference of European Schools for Advanced Engineering Education and Research (CESAER) as being most relevant for this type of institutions.

1. The aims of this readymade ranking

This readymade ranking aims to show how universities of science and technology perform on a number of indicators particularly important for this institutional profile. The selection of indicators applied in the readymade ranking was selected by [CESAER](#), a leading group of European universities of science and technology. They convey the dimensions teaching and learning, research, knowledge transfer and international orientation.

2. The selection of institutions to compare

As there is no formal definition of “Universities of Science and Technology”, we combined two criteria to identify the institution to be included: First, we included all institutions at which more than 40% of all graduates are coming from science and technology fields. Second, institutions with “tech” in their (English) name have been added to our selection, since a number of universities that are widely regarded as being “technical universities” have a high percentage of students in other fields (e.g. business studies) so that they did not pass our threshold of 40 %. In order to compare institutions with a comparable profile and mission, we included only PhD awarding institutions. Please note that the readymade ranking shows only institutions with valid scores on at least half of the indicators included.

3. The selection of indicators

This readymade ranking is looking on the full performance of universities of science and technology, it does not focus on one particular dimension only. Universities of science and technology are doing both teaching and research. In addition the transfer of technology and knowledge into society is a core part of their mission. Furthermore, in a global knowledge economy their international involvement and cooperation is highly relevant for their profile and performance. Out of those four dimensions, a CESAER working group, which is involved in U-Multirank from its beginning, selected the indicators regarded as most relevant for science and technology, 24 on the institutional level and 20 on the subject level. The readymade ranking is produced for nine science and technology subjects included in U-Multirank: mathematics, biology, chemistry, computer science, mechanical engineering, electrical engineering, chemical engineering, industrial engineering/production and civil engineering.

Please note that the ranking is sorted by the relative number (percentage) of top scores (“A”), followed by the relative number of “B” scores etc. in relation to all indicators available for an institution.

4. Examples of interesting results

None of the 231 universities of science and technology achieved “A” scores across all fourteen indicators selected for the readymade ranking on the institutional level. Caltech received an “A” score on seven out of eight available indicators, and the Technical University Denmark on 11 out of 13 indicators. The top 25 universities represent 12 different countries; among them six from France and five from the US. The ranking shows different profiles of universities of science and technology: While a number of institutions are placed in the top group for either all research indicators (measuring research output and impact), or for all indicators on knowledge transfer (focusing on transfer and industry relations), only one university (Georgia Tech) has an “A” score on all indicators in both dimensions. Some of the European universities in the top range of the ranking show a very strong international orientation: Technical University Denmark, Telecom Paris, INP Grenoble and Chalmers University reached a top group position in all four indicators of international orientation.

The ranking is also presented for nine subject areas from the field of science and technology. On the subject level, some universities score “A” on all indicators on which data are available for them: For example, TU Delft and MIT in mechanical engineering, EPF Lausanne, ET Zürich, and Telecom Paris in Computer Science, and, Chalmers University, as well as TU Delft and KTH Royal Institute of Technology in electrical engineering.