

Research Universities of the Year Ranking Method

Canada's Top 50 Research Universities List 2006 rank orders universities based on their total sponsored research income. In order to obtain a more balanced picture of how universities are performing, the Research Universities of the Year rankings take into account both financial input and research output indicators. The financial input indicator includes 2 measures: total sponsored research income and faculty research intensity. The research output indicator comprises 3 measures this year for the first time: total number of publications, publication intensity and publication impact.

Points were assigned for each measure, with the university faring the best in each category receiving 100 points and the last place universities receiving two points. Additionally, the two "input" criteria were then weighted back to 50 points with each individual measure worth 25.0 points for a total of a possible 50 points. The three "output" measures were weighted to 50 points with each individual measure worth 16.67 points for a total of a possible 50 points. The total score for each university was out of a possible 100 points.

Listed below is an explanation of each criterion.

A. Financial Input Indicators – measures that indicate each institution's success in attracting financial support to conduct research (total of a possible 50 points)

Financial data were obtained from Statistics Canada. Faculty data were obtained from Statistics Canada, Conférence des recteurs et des principaux des universités du Québec (CREPUQ) and the RESEARCH Infosource University R&D Database.

1. Total Sponsored Research Income (worth 25.0 points)
 - ▶ Points are based on the university's Fiscal 2005 Top 50 rankings.
2. Faculty Research Intensity (worth 25.0 points)
 - ▶ Faculty research intensity is defined as total research income per full-time faculty position (full, associate and assistant faculty positions only were included). Fiscal 2005 research income and academic year 2004-2005 full-time faculty data were used to calculate rank order and allocate points.

B. Research Output Indicators – measures that indicate each institution's success in publishing in the peer-reviewed academic literature (total of a possible 50 points)

Publication and impact data were obtained from Observatoire des sciences et des technologies' (OST) Canadian bibliometric database which contains data from the SCI, SSCI and AHCI databases of Thomson Scientific. Faculty data were obtained from Statistics Canada.

1. Total Number of Publications (worth 16.67 points)
 - ▶ Publications include articles, notes and reviews published by researchers affiliated with Canadian universities or research hospitals in approximately 6,000 peer-reviewed scientific international journals, covering different fields of natural science, health science and social science and humanities. Points are based on the total number of publications published by researchers affiliated with a particular university. Rankings were based on publication data for 2004 (the latest available data).
2. Publication Intensity (worth 16.67 points)
 - ▶ Publication intensity is defined as the total number of publications per full-time faculty. It has been estimated that there is, on average, a minimum 2-year lag time between research and publication.

Calendar year 2004 was used for publication counts and therefore 2001-2002 full-time faculty counts were used to calculate the ranking and allocate points.

3. Publication Impact (worth 16.67 points)

- ▶ Points are based on the Average Relative Impact Factor (ARIF), which was developed and provided by OST. It is based on a measure of the perceived impact of research through a calculation of citations received by journals. The impact factor does not measure the specific number of citations per article (direct impact), but rather, a measure of the probability of being cited (perceived impact). OST developed the ARIF to compare the impact factor from several specialties because an article's probability of being cited is not the same for all fields. The ARIF does not include journals from the Humanities field. To ensure that the ARIF score was meaningful, any university with less than 50 publications was not allocated points. Rankings were based on ARIF scores for 2004.