Research Universities of the Year Ranking Method 2019

Canada's Top 50 Research Universities List 2019 ranks full-service 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 (RUY) rankings[1] take into account key measures of research success. The measures included are: total sponsored research income, research intensity per faculty, research intensity per graduate student, total number of publications, publication intensity and publication impact.

For each measure, the top ranking institution in each tier (category) was assigned a score of 100 point and the other institutions' score were calculated as a percent of the first ranking institution. The total score for each university was out of a possible 100 points.

Listed below is an explanation of each criterion:

1. Total Sponsored Research Income (20%)
   - Based on the university's Fiscal 2018 Top 50 sponsored research income amount.
   - Financial data were obtained from Statistics Canada except where otherwise noted on the Top 50 Research Universities list.

2. Research Intensity per Faculty (20%)
   - Research intensity per faculty is defined as total research income per faculty (full, associate and assistant faculty positions only were included). Fiscal 2018 research income and academic year 2017-2018 faculty data were used to calculate ranks and allocate points.
   - Faculty data were obtained from the Research Infosource University R&D Database.

3. Research Intensity per Graduate Student (10%)
   - Research intensity per graduate student is defined as total research income per graduate student (graduate students include full and part-time students enrolled in graduate level master's and doctorate programs and courses leading to degrees, certificates or diplomas). Fiscal 2018 research income and academic year 2017-2018 graduate student enrollment data were used to calculate ranks and allocate points.
   - Graduate student data were obtained from Maritime Provinces Higher Education Commission, Ministère de l'Éducation et de l'Enseignement supérieur, Ontario Ministry of Advanced Education and Skills Development, Manitoba Advanced Learning Division, Alberta Advanced Education, BC HEADSet and some individual universities.

4. Total Number of Publications (20%)
   - Publications include articles, notes and reviews published by researchers affiliated with Canadian universities or research hospitals in 12,788 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 bibliographic calendar year 2017 (the latest final data available).
   - Publication data were obtained from Observatoire des sciences et des technologies (Clarivate Analytics – Web of Science).

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[1] For the Research Universities of the Year rankings only full-service universities that placed on the Top 50 list are included. To be eligible to be included in the Research Universities of the Year Tier rankings, full-service universities must have ranked in the top 50% in their respective tier for 5 out of 6 measures.

5. Publication Intensity (20%)
   - Publication intensity is defined as the total number of publications per faculty (full, associate and assistant faculty positions only were included). It has been estimated that there is, on average, a minimum 2-year lag time between research and publication. Bibliographic calendar year 2017 was used for publication counts and academic year 2014-2015 for faculty counts were used to calculate the ranking and allocate points.
   - Faculty data were obtained from the Research Infosource University R&D Database.

6. Publication Impact (10%)
   - 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 on the Humanities field. To ensure that the ARIF score was meaningful, any university with less than 125 publications was not allocated points. Rankings were based on ARIF scores for 2017 (the latest final data available).
   - Impact data were obtained from Observatoire des sciences et des technologies (Clarivate Analytics – Web of Science).