

**2021 ARWU Subject Rankings**

**SUMMARY**

- In 2021, McMaster was ranked in 42 of ARWU’s 54 subject areas.
- McMaster had 6 subjects in the top 100 with 2 subject areas— Civil Engineering (40) and Clinical Medicine (42)—ranked in the top 50.

**BACKGROUND**

**Subject Rankings**

The Academic Ranking of World Universities (ARWU) by Subject is an annual ranking of the world’s top universities in 54 subject areas. The top 50 scoring universities are ranked individually, whereas institutions ranked above 50 are included into groups.

ARWU uses five indicators to rank each university’s quality of education:

- **Publications:** The number of papers authored in a subject area.
- **Citation Impact:** The ratio of citation papers published to average citations in the same subject area.
- **International Collaboration:** The number of publications that have authors in two different countries.
- **Top Publications:** The number of publications in top rated journals in the subject area.
- **Awards:** The number of staff who have Nobel or Field Prize awards in the subject area.

The weighting of each indicator varies based on each subject area.

**CURRENT STATUS**

In June of 2021, ARWU released its annual Subject Rankings for the top 500 institutions in each subject area for 2021.

In total, McMaster was ranked in 42 out of ARWU’s 54 subject areas. Overall, McMaster improved its total rank in 4 of the subject areas in which the University was ranked.

In 2021, McMaster had 6 subjects within the top 100, which was one fewer subject from 2020. One new subject area entered the top 100 for McMaster in 2021 (Pharmacy & Pharmaceutical Science), while two subject areas that were previously in the top 100 fell out of the top 100 (Nursing and Water Resources). McMaster once again had 2 subjects ranked within the top 50 internationally: Civil Engineering and Clinical Medicine. Among Canadian peers, McMaster had 5 subjects that ranked within the top 5: Civil Engineering, Water Resources, Metallurgical Engineering, Human Biological Sciences, and Clinical Medicine.

Table 1 shows the subject areas where the University ranked among the top 100 globally in 2021. McMaster’s highest ranked subject areas were Civil Engineering and Clinical Medicine which ranked 40<sup>th</sup> and 42<sup>nd</sup> overall, respectively. Civil Engineering saw its rank fall by 7 positions and its score also decrease. On the other hand, Clinical Medicine saw an increase to its rank by 4 positions. Pharmacy and Pharmaceutical Science also saw its rank increase from 101-150 in 2020 to 76-100 in 2021.

**Table 1: McMaster University, Top 100 Ranked Subjects, 2020 & 2021**

	2020		2021		Δ	
	Rank	Score	Rank	Score	Rank	Score
Civil Engineering	33	192.7	40	177.2	-7	-15.5
Clinical Medicine	46	179.6	42	179.9	4	0.3
Metallurgical Engineering	51-75	N/S	51-75	N/S	N/C	N/S
Transportation Science & Technology	51-75	N/S	51-75	N/S	N/C	N/S
Public Health	76-100	N/S	76-100	N/S	N/C	N/S
Pharmacy & Pharmaceutical Science	101-150	N/S	76-100	N/S	Increase	N/S

N/R = Not Ranked; N/C = No Change; N/S = No Score Available; Increase = Climb in Rank; Decrease = Fall in Rank

**METHODOLOGY**

Unlike QS and Times Higher Education, ARWU does not ask institutions to submit data to them. All publication data is taken from Web of Science and InCites’s database for citations. Nobel Prizes and Field Medal recipients are taken directly from each of the award’s respective websites.

Due to the large number of subject areas represented in the ARWU Subject Rankings (54), ARWU does not simply apply the same weight to each of the ranking indicators for all subject areas. Instead, each of the five ranking indicators are weighted appropriately to correspond with the norm of that subject area. Each ranking indicator is then given a score out of 100 that is normalized to the top performing institution. The total score for an institution is the sum of an institution’s five ranking indicators for that subject area. Thus, the institution with the largest sum is the top ranked in that subject area. ARWU only ranks and displays the total score for the top 50 ranked universities in each subject area. Institutions ranked above 50 are not given a total score and are categorized into the following groups: 51-75, 76-100, 101-150, 151-200, 201-300, 301-400 and 401-500.