

# A history of Canada's full-time faculty in six charts

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A look at some UCASS data from 1970 to 2016.

Last year, Statistics Canada released University and College Academic Staff System survey data for the first time in five years. (The survey had been scrapped in 2012 and revived in 2016.) This data on full-time faculty at 112 universities and colleges offers an important snapshot of Canada's professoriate (read more about the latest results [here](#)).

The UCASS survey goes back to 1937, but 1970 is the earliest date for a continuous time series. *University Affairs* took a closer look at this data, starting from 1970, and the resulting six charts tell a partial history of Canada's full-time faculty over nearly five decades (no data was available from 2011 to 2015 while UCASS was on hiatus).

*Hover over each graph to see the numbers in more detail. And note that the dates listed represent academic years (e.g. 2016-17, 1970-71) rather than calendar years.*

Figure 1: Number of full-time academic staff, 1970-71 to 2016-17  
 17FemaleMaleTotal19701974197819821986199019941998200220062010015,00030,00045,00060,000

Year	Female	Male	Total
1970	3,138	21,459	24,597
1971	3,318	22,767	26,085
1972	3,365	23,285	26,650
1973	3,448	23,664	27,112
1974	3,847	24,726	28,573
1975	3,990	25,090	29,080
1976	3,961	24,590	28,551
1977	4,304	25,979	30,283
1978	4,406	26,453	30,859
1979	4,372	26,246	30,618
1980	4,534	26,565	31,099
1981	4,691	26,800	31,491
1982	4,740	26,488	31,228
1983	5,196	28,042	33,238
1984	5,351	28,257	33,608
1985	5,612	28,587	34,199
1986	5,783	28,674	34,457
1987	5,979	28,672	34,651
1988	6,345	28,946	35,291
1989	6,758	29,159	35,917
1990	7,122	29,306	36,428
1991	7,563	29,281	36,844
1992	7,943	29,323	37,266
1993	8,082	28,828	36,910
1994	8,278	28,124	36,402
1995	8,497	27,547	36,044
1996	8,441	26,172	34,613
1997	8,565	25,137	33,702
1998	8,804	24,861	33,665
1999	9,155	24,646	33,801
2000	9,630	24,728	34,358
2001	10,184	24,929	35,113
2002	10,780	25,273	36,053
2003	11,497	25,707	37,204
2004	12,292	26,280	38,572

Year	Female	Male	Total
2005	12,939	26,676	39,615
2006	13,559	27,008	40,567
2007	14,120	27,186	41,306
2008	14,613	27,341	41,954
2009	16,070	28,353	44,423
2010	16,448	28,486	44,934
2011			
2016	18,099	27,561	45,660
2016	18,099	27,561	45,660

While female faculty members may have been a rarity back when the survey started in 1937, the number of women in the professoriate steadily grew throughout the last 47 years (see Figure 1). In 1970, women made up 13 percent of total full-time faculty (there were 3,138 female professors out of a total 24,597 faculty). By 2016, women made up 40 percent of total full-time faculty members (18,099 women out of a total of 45,660 faculty).

Figure 2: Median salary for full-time academic staff by gender, in constant 2016 dollars  
Male Female 50,000 75,000 100,000 125,000 150,000 2016 2010 2000 1990 1980 1970

Year	Male	Female
2016	136,844	121,872
2010	128,293	113,535
2000	113,720	95,982
1990	113,778	90,944
1980	110,886	90,711
1970	91,648	73,757

In terms of gender and salary (Figure 2), although women are increasingly represented in the professoriate, men remain its top earners. The gap in median salary between men and women (in constant, inflation-adjusted dollars) was widest in 1990, when men earned around 25 percent more than women. However, the latest UCASS data show women are closing the pay gap: the median salary for men in 2016 was \$136,844 while women earned \$121,872 – a gap of about 12 percent.

Professional rank may provide context for this difference in pay (Figure 3).

Figure 3: Number of full-time academic staff by rank and gender, 1970-7 to 2016-17  
Male full professor Female full professor Male associate professor Female associate professor Male assistant professor Female assistant professor 1970 1973 1976 1979 1982 1985 1988 1991 1994 1997 2000 2002

Year	Male full professor	Female full professor	Male associate professor	Female associate professor	Male assistant professor	Female assistant professor
1970	4,669	165	5,946	522	7,734	1,241
1971	5,171	189	6,670	637	8,047	1,350
1972	5,526	217	7,284	695	8,085	1,409
1973	5,904	246	7,749	796	7,687	1,427
1974	6,374	272	8,283	888	7,441	1,561
1975	6,799	298	8,837	976	7,015	1,612
1976	7,060	309	9,138	1,090	6,394	1,563
1977	7,785	364	9,853	1,252	6,392	1,681
1978	8,182	396	10,339	1,414	6,053	1,647
1979	8,512	410	10,321	1,429	5,619	1,595
1980	9,028	456	10,536	1,519	5,251	1,610
1981	9,505	503	10,585	1,624	4,999	1,651
1982	10,010	556	10,404	1,683	4,580	1,618
1983	10,855	637	10,942	1,884	4,847	1,821
1984	11,174	677	10,906	1,963	4,821	1,858
1985	11,579	748	10,843	2,027	4,840	1,962
1986	11,772	801	10,623	2,082	4,840	1,980
1987	11,980	849	10,500	2,150	4,844	2,086
1988	12,161	911	10,403	2,226	4,979	2,238
1989	12,395	965	10,315	2,343	5,067	2,390
1990	12,639	1,040	10,164	2,469	5,166	2,567

Year	Male full professor	Female full professor	Male associate professor	Female associate professor	Male assistant professor	Female assistant professor
1991	13,189	1,297	9,967	2,607	5,236	2,759
1992	13,387	1,401	9,901	2,782	5,158	2,885
1993	13,285	1,496	9,804	2,921	4,952	2,839
1994	13,271	1,583	9,667	3,104	4,487	2,815
1995	13,139	1,687	9,502	3,237	4,257	2,816
1996	12,648	1,723	9,040	3,333	3,848	2,656
1997	12,110	1,800	8,694	3,401	3,658	2,635
1998	11,972	1,899	8,517	3,491	3,633	2,663
1999	11,875	1,992	8,138	3,564	3,866	2,781
2000	11,735	2,103	7,954	3,687	4,172	2,920
2001	11,660	2,249	7,841	3,822	4,655	3,221
2002	11,532	2,393	7,793	3,886	5,130	3,516
2003	11,476	2,553	7,833	4,041	5,483	3,829
2004	11,376	2,648	7,917	4,225	6,002	4,236
2005	11,290	2,737	8,168	4,479	6,164	4,482
2006	11,183	2,856	8,450	4,745	6,233	4,677
2007	11,172	3,015	8,634	4,984	6,178	4,808
2008	11,195	3,187	8,958	5,250	5,995	4,829
2009	11,364	3,354	9,320	5,621	5,733	4,858
2010	11,447	3,499	9,550	5,923	5,446	4,715
2011						
2016	11,748	4,488	9,273	6,999	4,401	4,143
2016	11,748	4,488	9,273	6,999	4,401	4,143

Men overwhelmingly dominate the ranks of full and associate professors in Canada, and thus the highest paid jobs in the country's professoriate – a fact that hasn't changed in more than four decades. (Note, in Figure 3, that the number of male full professors in Canada peaked at 13,387 – or 91 percent of all full professors – in 1992, around the same time that the pay gap was at its widest.) The shrinking of the pay gap between men and women over the past decade may correspond to an increase in women in the ranks of full professor and associate professor during that same time.

Figure 4: Number of full-time academic staff by rank, 1970-71 to 2016-17

Year	Full professor	Associate professor	Assistant professor	Other Rank	Total
1970	4,834	6,468	8,975	4,320	24,597
1971	5,360	7,307	9,397	4,021	26,085
1972	5,743	7,979	9,494	3,434	26,650
1973	6,150	8,545	9,114	3,303	27,112
1974	6,646	9,171	9,002	3,754	28,573
1975	7,097	9,813	8,627	3,543	29,080
1976	7,369	10,228	7,957	2,997	28,551
1977	8,149	11,105	8,073	2,956	30,283
1978	8,578	11,753	7,700	2,828	30,859
1979	8,922	11,750	7,214	2,732	30,618
1980	9,484	12,055	6,861	2,699	31,099
1981	10,008	12,209	6,650	2,624	31,491
1982	10,566	12,087	6,198	2,377	31,228
1983	11,492	12,826	6,668	2,252	33,238
1984	11,851	12,869	6,679	2,209	33,608
1985	12,327	12,870	6,802	2,200	34,199
1986	12,573	12,705	6,820	2,359	34,457
1987	12,829	12,650	6,930	2,242	34,651
1988	13,072	12,629	7,217	2,373	35,291
1989	13,360	12,658	7,457	2,442	35,917

Year	Full professor	Associate professor	Assistant professor	Other Rank	Total
1990	13,679	12,633	7,733	2,383	36,428
1991	14,486	12,574	7,995	1,789	36,844
1992	14,788	12,683	8,043	1,752	37,266
1993	14,781	12,725	7,791	1,613	36,910
1994	14,854	12,771	7,302	1,475	36,402
1995	14,826	12,739	7,073	1,406	36,044
1996	14,371	12,373	6,504	1,365	34,613
1997	13,910	12,095	6,293	1,404	33,702
1998	13,871	12,008	6,296	1,490	33,665
1999	13,867	11,702	6,647	1,585	33,801
2000	13,838	11,641	7,092	1,787	34,358
2001	13,909	11,663	7,876	1,665	35,113
2002	13,925	11,679	8,646	1,803	36,053
2003	14,029	11,874	9,312	1,989	37,204
2004	14,024	12,142	10,238	2,168	38,572
2005	14,027	12,647	10,646	2,295	39,615
2006	14,039	13,195	10,910	2,423	40,567
2007	14,187	13,618	10,986	2,515	41,306
2008	14,382	14,208	10,824	2,540	41,954
2009	14,718	14,941	10,591	4,173	44,423
2010	14,946	15,473	10,161	4,354	44,934
2011					
2016	16,239	16,272	8,544	4,605	45,660
2016	16,239	16,272	8,544	4,605	45,660

In Figure 4, there are a few interesting trends between the ranks of full professor, associate professor and assistant professor. For example, from 1972 to 1994, you can seemingly follow a cohort of assistant professors as they go up the ranks of tenure throughout their careers. (A cohort that is largely male, according to Figure 3.)

In 1972 there are 9,494 assistant professors (85 percent of these are male) and 5,743 full professors (96 percent male), 7,979 associate professors (91 percent male).

Twelve years later, in 1984, the number of assistant professors drops by about 30 percent while the number of associate professors jumps about 61 percent. By 1994, a decade after that first peak in the associate professor ranks and more than 20 years after that cohort of assistant professors presumably got on the tenure-track in 1972, the number of full professors reached 14,854 (89 percent male) – an all-time high for full professors that would not be unseated until 2010, when it reached 14,946 (77 percent male). In 2016, the number of full professors was 16,239 (72 percent male) while associate professors clocked in at an all-time high of 16,272 (about 57 percent male).

As the number of female professors increased over the last decade, a similar “cycling” through the ranks seems to have begun for this cohort, suggested by the overlapping female assistant professor (2,885) and female associate professors (2,921) in Figure 3, that starts around 1992.

Figure 5: Number of full-time academic staff by age groups, 1970-71 to 2016-1729 and under 30 to 3940 to 4950 to 5960 +19701973197619791982198519881991199419972000200320062009201605,00010,00015,000

Year	29 and under	30 to 39	40 to 49	50 to 59	60 +
1970	3,975	10,563	6,300	2,790	864
1971	3,612	11,301	7,026	3,150	906
1972	2,931	11,781	7,536	3,405	936
1973	2,283	12,039	7,830	3,639	1,014
1974	2,094	12,600	8,601	4,110	1,119
1975	1,842	12,552	9,024	4,431	1,197
1976	1,518	11,805	9,249	4,641	1,218
1977	1,389	12,285	10,065	5,130	1,392
1978	1,224	11,883	10,647	5,610	1,458
1979	1,032	11,130	10,995	5,931	1,488
1980	909	10,506	11,604	6,393	1,653
1981	831	9,801	12,120	6,858	1,845

Year	29 and under	30 to 39	40 to 49	50 to 59	60 +
1982	756	8,826	12,462	7,185	1,980
1983	747	8,754	13,614	7,863	2,235
1984	657	8,295	13,941	8,289	2,403
1985	624	8,031	14,091	8,754	2,682
1986	564	7,668	14,223	9,186	2,790
1987	528	7,422	14,157	9,660	2,850
1988	525	7,452	14,064	10,170	3,006
1989	525	7,548	13,899	10,677	3,192
1990	486	7,587	13,620	11,268	3,396
1991	420	7,665	13,380	11,763	3,564
1992	417	7,470	13,017	12,525	3,807
1993	312	7,113	12,552	13,047	3,846
1994	246	6,708	12,123	13,332	3,957
1995	219	6,378	11,937	13,407	4,074
1996	189	5,844	11,448	13,275	3,816
1997	195	5,499	11,187	13,164	3,609
1998	186	5,439	11,037	13,110	3,834
1999	231	5,361	10,983	12,936	4,071
2000	255	5,586	11,103	12,783	4,401
2001	273	5,955	11,244	12,696	4,719
2002	315	6,351	11,490	12,603	5,253
2003	360	6,783	11,763	12,540	5,715
2004	342	7,353	12,165	12,657	6,030
2005	327	7,656	12,480	12,930	6,186
2006	294	7,953	12,648	13,023	6,609
2007	312	8,184	12,723	12,990	7,077
2008	282	8,193	12,828	13,116	7,503
2009	255	8,382	13,557	13,989	8,232
2010	231	8,007	13,761	14,247	8,673
2011					
2016	225	6,795	13,863	14,217	10,560
2016	225	6,795	13,863	14,217	10,560

In Figure 5, the data backs up what academics already know: many professors are experiencing a long delay in joining the ranks of full-time faculty. Few have joined by the age of 39 (the average age of a person graduating with a PhD in Canada is 35) and around 2008, we see the beginning of an important change: the number of full-time professors aged 30-39 decreases to about 15 percent of total faculty in 2016 after holding steady at about 20 percent of total faculty from 2005-2008. Meanwhile, faculty members aged 60 and up, have been steadily rising in numbers. By 2016, the latter group experienced a bump to about 23 percent total faculty in that year (compared to about 18 percent in 2008).

Like the Canadian workforce in general, the professoriate is getting older – a trend that coincides with the loss of mandatory retirement.

Figure 6: Median age of full-time academic staff, 1970-71 and 2016-17

	1970	2016
Full professor	48	57
Associate professor	40	49
Assistant professor	33	39
Rank or level below assistant professor	30	49
Other ranks (not elsewhere classified)	34	52
Total rank	37	51

The overall greying of the professoriate is also reflected in Figure 6. The median age of full-time faculty increased to 51 in 2016 from 37 in 1970. At the assistant professor rank – generally considered “entry level” in the career of a tenured professor – the median age is now 39. It’s only a six-year difference from the median age of 33 in 1970, but it still suggests academics are getting on the tenure track a bit later in life. The rank below assistant, which presumably includes limited-term faculty postings and the like, has aged sharply: from a median age of 30 in 1970 to 49 by 2016. Along with that fact that “Other ranks” experienced

the biggest jump, from 34 to 52, this may indicate that more academics are staying in posts that are full-time, but not necessarily on the tenure track.

## What's next?

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Statistics Canada is set to release early data from the 2017-18 UCASS survey in April. The agency is currently exploring the feasibility of collecting part-time faculty data in future surveys, as well as data on race and other demographic categories.

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