

2017 APEGS Salary Survey Summary Results

The Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) contacted 5,489 Professional Engineers, Professional Geoscientists, Engineers-in-Training, Geoscientists-in-Training and Licensees living in Saskatchewan. A total of 2,072 members completed the survey, representing a 37.7 per cent response rate. Surveys were completed in February and March 2017 and salaries reported were as at December 31, 2016. Inshtrix Research Inc. compiled and tabulated all results. The detailed report, which includes analysis by gender, can be found on the APEGS website at <http://www.apegs.ca/Portal/Pages/salary-survey>

The main goals of the survey are:

- to provide information to all members regarding monetary compensation for different levels of responsibility and advanced degrees;
- to provide information to employers to assist them in establishing appropriate pay levels for recent graduates and ensuring competitive compensation packages for experienced professionals; and
- to give students, career counsellors and other interested persons information on employment, including salaries, in the engineering and geoscience professions in Saskatchewan.

Annual Salary by Final Year of Graduation (B.Sc.)

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
1976 & Prior	43	2.1%	\$151,152	\$118,364	\$128,501	\$148,873	\$170,782	\$190,636
1977*								
1978	10	0.5%	\$187,654	\$0	\$125,544	\$157,500	\$215,000	\$295,000
1979*								
1980	19	1.0%	\$135,352	\$60,000	\$107,000	\$140,000	\$168,000	\$197,000
1981*								
1982	23	1.2%	\$145,510	\$94,000	\$110,000	\$140,000	\$165,000	\$213,238
1983	15	0.8%	\$160,487	\$30,000	\$120,000	\$153,000	\$203,000	\$265,000
1984	14	0.7%	\$162,107	\$85,000	\$120,000	\$161,000	\$195,000	\$281,000
1985	18	0.9%	\$150,167	\$16,927	\$110,000	\$133,114	\$186,000	\$270,000
1986	27	1.4%	\$138,794	\$70,000	\$92,500	\$150,000	\$180,000	\$212,000
1987	24	1.2%	\$132,713	\$10,200	\$113,786	\$148,200	\$162,144	\$194,000
1988	22	1.1%	\$140,656	\$100,000	\$121,000	\$150,000	\$167,271	\$182,000
1989	22	1.1%	\$134,755	\$82,000	\$103,380	\$139,000	\$157,000	\$183,000
1990	24	1.2%	\$147,249	\$104,000	\$125,000	\$142,500	\$176,305	\$192,000
1991	18	0.9%	\$146,305	\$60,000	\$114,000	\$141,000	\$175,500	\$225,000
1992	17	0.9%	\$187,551	\$0	\$110,000	\$130,000	\$149,000	\$200,000
1993	20	1.0%	\$178,423	\$25,564	\$94,126	\$120,417	\$155,750	\$200,000
1994	33	1.7%	\$137,872	\$80,000	\$96,300	\$138,485	\$168,700	\$202,000
1995	25	1.3%	\$162,432	\$110,000	\$128,000	\$160,000	\$180,000	\$246,000
1996	31	1.6%	\$139,525	\$75,000	\$100,131	\$150,000	\$180,000	\$198,000
1997	35	1.8%	\$138,524	\$90,000	\$105,000	\$128,000	\$160,000	\$236,000
1998	29	1.5%	\$107,317	\$40,000	\$90,000	\$110,000	\$130,000	\$155,000
1999	38	1.9%	\$123,339	\$90,000	\$100,000	\$119,500	\$130,000	\$192,000
2000	57	2.9%	\$118,603	\$66,000	\$97,600	\$114,000	\$137,000	\$172,212
2001	59	3.0%	\$115,180	\$61,000	\$100,962	\$119,000	\$135,000	\$163,000
2002	57	2.9%	\$119,639	\$76,000	\$106,000	\$113,000	\$139,000	\$165,000
2003	47	2.4%	\$117,277	\$69,000	\$100,000	\$115,927	\$128,700	\$174,451
2004	59	3.0%	\$111,281	\$70,000	\$89,200	\$110,000	\$121,000	\$174,000
2005	68	3.5%	\$108,836	\$64,500	\$91,527	\$110,000	\$126,500	\$150,000
2006	57	2.9%	\$105,174	\$52,000	\$89,700	\$106,500	\$118,800	\$157,700
2007	99	5.0%	\$100,196	\$46,657	\$87,550	\$99,300	\$117,000	\$135,000
2008	97	4.9%	\$95,734	\$67,200	\$84,600	\$93,900	\$105,060	\$145,000
2009	102	5.2%	\$94,770	\$64,000	\$85,000	\$94,335	\$105,000	\$126,000
2010	112	5.7%	\$88,678	\$65,000	\$78,000	\$87,750	\$101,200	\$120,000
2011	116	5.9%	\$86,246	\$62,000	\$73,100	\$80,658	\$95,650	\$129,600
2012	133	6.8%	\$84,392	\$55,000	\$71,000	\$78,000	\$87,750	\$111,500
2013	114	5.8%	\$77,466	\$58,830	\$67,700	\$74,000	\$85,000	\$106,000
2014	102	5.2%	\$70,167	\$50,000	\$60,000	\$69,000	\$81,500	\$91,100
2015	111	5.6%	\$67,972	\$50,640	\$60,000	\$64,608	\$75,000	\$91,000
2016	53	2.7%	\$64,917	\$43,000	\$58,000	\$63,432	\$72,000	\$85,000

*Not available due to reporting rules (insufficient data)

Annual Salary by Designation

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
P.Eng.	1274	64%	\$119,952	\$73,000	\$91,150	\$109,582	\$136,000	\$192,000
P.Geo.	82	4%	\$126,627	\$78,500	\$100,000	\$124,500	\$145,000	\$185,000
P.Eng. and P.Geo	19	1%	\$143,191	\$30,000	\$110,000	\$160,000	\$168,000	\$210,000
Engineering License	14	1%	\$121,761	\$86,000	\$97,500	\$114,500	\$140,000	\$190,000
Engineer-in-Training	572	29%	\$74,406	\$50,000	\$63,000	\$71,030	\$82,500	\$110,000
Geoscientist-in-Training	33	2%	\$76,044	\$32,000	\$62,000	\$72,000	\$88,000	\$150,000
Geo Licensee*								

Annual Salary by Discipline

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Civil	421	21.1%	\$99,529	\$60,000	\$72,000	\$91,500	\$110,000	\$170,000
Mechanical/Industrial	456	22.8%	\$104,092	\$60,000	\$78,000	\$96,108	\$123,089	\$179,262
Electrical/Eng. Physics	315	15.8%	\$110,295	\$60,000	\$77,000	\$100,000	\$127,000	\$164,000
Chem/Ceramic/Metal	91	4.6%	\$116,230	\$70,450	\$85,000	\$105,000	\$146,219	\$192,000
Geo/Mining/Petro	237	11.9%	\$128,305	\$70,000	\$90,900	\$110,000	\$149,000	\$208,000
Agriculture Forestry	46	2.3%	\$82,690	\$50,000	\$64,534	\$75,700	\$93,000	\$145,000
Environmental	125	6.3%	\$93,469	\$54,000	\$72,000	\$90,000	\$110,000	\$154,000
Geo./Hydro.	95	4.8%	\$111,406	\$54,000	\$82,000	\$105,000	\$137,000	\$185,000
Software/Computer	40	2.0%	\$91,667	\$48,250	\$72,250	\$88,710	\$109,250	\$153,738
Biological/Biomedical*								
Industrial*								
Other	165	8.3%	\$111,905	\$57,000	\$75,533	\$100,962	\$140,000	\$200,000

Annual Salary by Function

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Corp. Mgmt.	136	6.8%	\$153,514	\$85,000	\$125,000	\$146,500	\$171,500	\$265,000
Project/Op. Mgmt.	778	39.0%	\$111,460	\$63,000	\$85,800	\$103,852	\$130,000	\$182,000
Project Admin.	64	3.2%	\$87,243	\$52,000	\$63,534	\$81,500	\$105,000	\$130,000
Design	410	20.5%	\$92,572	\$57,000	\$70,000	\$80,978	\$102,000	\$150,000
Research/Planning	125	6.3%	\$94,328	\$40,000	\$70,624	\$89,000	\$120,000	\$150,000
Inspec./Quality/Res.	69	3.5%	\$78,832	\$52,000	\$63,000	\$72,000	\$91,000	\$133,000
Operating/Maint.	176	8.8%	\$111,344	\$56,472	\$81,277	\$95,670	\$120,000	\$165,000
Teaching	40	2.0%	\$155,022	\$80,000	\$96,000	\$137,500	\$166,500	\$202,500
Marketing/Sales	28	1.4%	\$105,422	\$60,000	\$77,500	\$87,750	\$107,500	\$190,000
Reg./Enforcement	65	3.3%	\$92,790	\$65,000	\$76,000	\$91,000	\$103,000	\$130,000
Exploration	39	2.0%	\$104,777	\$32,000	\$73,713	\$95,677	\$135,000	\$185,000
Other	66	3.3%	\$100,045	\$49,000	\$72,000	\$96,840	\$125,000	\$165,000

*Not available due to reporting rules (insufficient data)

Annual Salary by Industry

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Consulting Service	479	24.0%	\$97,691	\$60,000	\$71,060	\$87,570	\$113,200	\$175,000
Oil & Gas	109	5.5%	\$97,400	\$55,000	\$75,200	\$90,000	\$116,286	\$155,000
Except Oil & Gas	369	18.5%	\$125,920	\$73,713	\$94,000	\$113,000	\$145,000	\$198,000
Procure/Const.	171	8.6%	\$102,137	\$62,400	\$72,000	\$93,000	\$120,000	\$185,000
Manufac. Durables	182	9.1%	\$89,602	\$53,857	\$67,200	\$82,350	\$109,000	\$145,000
Manufac. Non-Durables	76	3.8%	\$128,908	\$57,700	\$85,445	\$108,450	\$146,860	\$212,000
Service For Profit	29	1.5%	\$102,446	\$49,000	\$70,000	\$81,500	\$101,112	\$205,000
Service Not For Profit	148	7.4%	\$99,331	\$59,892	\$80,000	\$97,270	\$111,050	\$150,000
Utilities	265	13.3%	\$115,930	\$62,000	\$86,000	\$109,920	\$131,635	\$177,610
Educational Services	76	3.8%	\$130,817	\$40,000	\$84,180	\$125,000	\$162,144	\$203,000
Agriculture/Forestry	18	0.9%	\$79,328	\$42,000	\$63,000	\$74,062	\$93,252	\$130,000
Other	74	3.7%	\$89,508	\$24,000	\$69,000	\$85,000	\$110,000	\$159,360

Annual Salary by Degrees

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Bachelor's	1367	68.5%	\$102,143	\$58,000	\$74,300	\$93,000	\$120,000	\$174,000
...	215	10.8%	\$111,268	\$66,000	\$85,000	\$103,347	\$129,361	\$180,434
Master's Degree	287	14.4%	\$117,747	\$55,000	\$80,500	\$106,000	\$130,000	\$186,000
...	36	1.8%	\$128,273	\$63,024	\$85,000	\$109,500	\$172,226	\$250,000
Doctorate	91	4.6%	\$130,425	\$55,000	\$95,000	\$137,000	\$162,287	\$193,000

Annual Salary by Experience

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
<1 year	79	4.0%	\$68,834	\$42,000	\$56,000	\$65,000	\$78,000	\$110,000
1 year	36	1.8%	\$68,149	\$24,000	\$60,000	\$62,916	\$75,000	\$109,000
1.5 years	79	4.0%	\$66,055	\$48,928	\$59,892	\$63,432	\$71,550	\$89,268
2 years	101	5.1%	\$71,960	\$45,500	\$62,790	\$68,700	\$80,000	\$110,160
3 years	132	6.6%	\$77,939	\$54,100	\$65,000	\$73,470	\$87,680	\$110,900
4 years	136	6.8%	\$81,433	\$60,613	\$70,860	\$78,000	\$86,750	\$117,956
5 years	165	8.3%	\$83,255	\$60,000	\$72,700	\$80,000	\$92,000	\$120,000
6 years	130	6.5%	\$97,788	\$69,000	\$79,600	\$90,000	\$102,500	\$125,000
7-8 years	193	9.7%	\$98,072	\$70,400	\$86,000	\$96,000	\$109,424	\$139,600
9-10 years	174	8.7%	\$107,469	\$75,000	\$93,900	\$103,500	\$121,165	\$150,000
11-12 years	133	6.7%	\$124,734	\$76,400	\$98,600	\$115,000	\$130,000	\$175,000
13-14 years	84	0.2%	\$117,369	\$89,200	\$100,481	\$110,419	\$128,350	\$165,000
15-17 years	145	7.3%	\$125,597	\$85,000	\$106,000	\$123,000	\$140,000	\$170,000
18-20 years	79	4.0%	\$157,796	\$90,014	\$110,000	\$135,000	\$171,000	\$246,000
21-24 years	95	4.8%	\$152,63	83,000	\$114,000	\$140,000	\$175,000	\$200,950
25+ years	235	11.8%	\$154,842	\$88,865	\$125,000	\$150,000	\$179,262	\$250,000

Annual Salary by Sector

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Public Sector	604	100.0%	\$110,358	\$60,000	\$80,000	\$103,000	\$128,000	\$180,000
Private Sector	1369	100.0%	\$105,717	\$59,085	\$75,000	\$95,400	\$123,177	\$180,000

Total Salary

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Base Salary	1996	100.0%	\$107,130	\$58,830	\$76,291	\$97,000	\$125,000	\$180,000
Salary incl. bonus	1996	100.0%	\$180,135	\$60,000	\$82,278	\$108,300	\$145,000	\$231,500

*Not available due to reporting rules (insufficient data)

Salary Changes - Full-Time Positions

	median	% change	mean	% change
1987	\$48,000		\$49,269	
1989	\$50,928	6.10%	\$62,887	27.64%
1991	\$54,110	6.25%	\$57,578	-8.44%
1993	\$54,480	0.68%	\$56,703	-1.52%
1995	\$56,400	3.52%	\$59,142	4.30%
1997	\$60,000	6.38%	\$62,266	5.28%
1999	\$62,500	4.17%	\$65,401	5.03%
2001	\$66,000	5.60%	\$68,877	5.31%
2003	\$68,800	4.24%	\$71,210	3.39%
2005	\$71,008	3.21%	\$73,607	3.37%
2007	\$74,000	4.21%	\$77,374	5.12%
2008	\$76,352	3.18%	\$83,025	7.30%
2009	\$80,000	4.78%	\$86,908	4.68%
2010	\$82,950	3.69%	\$91,548	5.34%
2011	\$84,224	1.54%	\$91,154	-0.43%
2012	\$89,472	6.23%	\$96,219	5.56%
2013	\$90,000	0.59%	\$98,030	1.88%
2014	\$94,500	5.00%	\$102,475	4.53%
2015	\$97,000	2.65%	\$105,111	2.57%
2016	\$96,000	-1.03%	\$104,628	-0.46%
2017	\$97,000	1.04%	\$107,130	2.39%

Regression Analysis

A stepwise linear regression was used to find the best model for predicting salaries for engineers and geoscientists working in different industries. This process was used to:

- Identify key factors which predict salary as well as factors which are not related to salary
- Make the results independent of the different scales used to measure each factor
- Identify Boolean components (such as receipt of professional designation) influencing salary
- Create a linear formula with as much predictive power as possible

An overall formula was also produced which members of APEGS can easily use to estimate their salary. The formula for 2017 explains about 50 per cent (48.2%) of variance in salary. Any model explaining at least 50per cent of the variance in the dependent variable can be considered an effective model. B-values are the raw numerical coefficients of each variable. Since the scales for each variable are different, the beta values are a better measure of relative importance of factors within the model. Refer to the "Classification Rating Guide" which can be found on www.apegs.ca to determine the values for each factor.

Factor	B (Coefficient)	Beta (Relative importance)
(Constant)	57315	
Duties (A)	157	0.210
Experience (C)	308	0.281
Supervision Scope (G)	810	0.188
Receipt of professional designation	7998	0.064

Formula for expected salary (SE) without bonus:

$$SE = Se=157*A+308*C+810*G+57,315$$

Add 7,998 if you have acquired professional status within your field (P.Eng. or P.Geo.)