

# Alberta's Supply Outlook Model 2015-2025

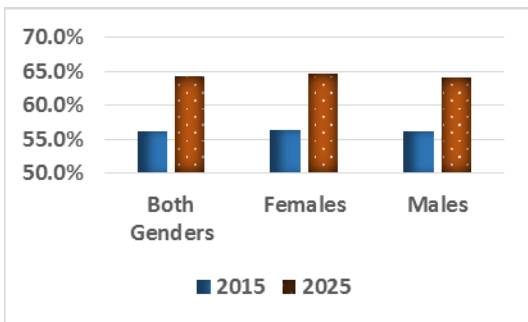
## Education and Skills



## Highlights

The proportion of Albertans with a post-secondary education is expected to increase from 56% in 2015 to 64% by 2025.

More females than males, 64.7% compared to 64.1%, are expected to obtain a post-secondary education by 2025.



More people will graduate from education, humanities, social science, physical and life sciences, mathematical and computer sciences at universities than at college and trade institutions.

More people will graduate from visual and performing arts, business, architecture and engineering, agriculture, health, and personal services at college and trade institutions than at universities.

At college and trade institutions, a higher percentage of males than females will graduate from mathematical and computer sciences, architecture and engineering, and agriculture. Females are expected to have higher percentages in physical and life sciences, education, business, visual and performing arts, social sciences, and health.

Of those Albertans with university degrees, females are more likely than males to graduate in education and health fields. Males are more likely to graduate in architecture and engineering and business, management, and public administration.

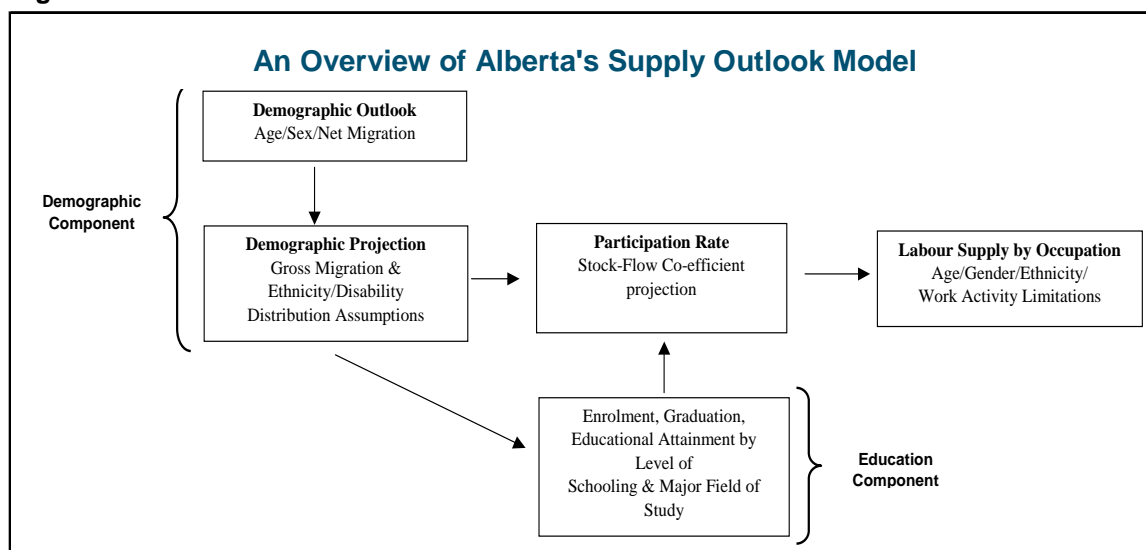
## Introduction

Every two years Alberta's Ministry of Labour produces Alberta's Occupational Demand and Supply Outlook Models<sup>1</sup>. Alberta's supply outlook model provides labour supply forecasts by occupation covering a 10-year forecast period. The model contains 30 linked sub-models and more than 100,000 data series.

The education sub-model is a critical component of the supply outlook model. The model forecasts the number of enrolments and graduates across eleven major fields of study, listed in Appendix A, for different levels of schooling. These forecasts can be translated into the occupations where these people are expected to look for employment. Figure 1 provides an overview of the supply outlook model and the role of the education component in forecasting labour supply.

The first section of the report looks at the projected educational attainment levels of Alberta's population. The remainder of the report gives an analysis of the major fields of study at different post-secondary education levels and by gender. Following the text, Appendix B details the assumptions underlying the education forecasts and Appendix C shows the results of the model projections.

**Figure 1**

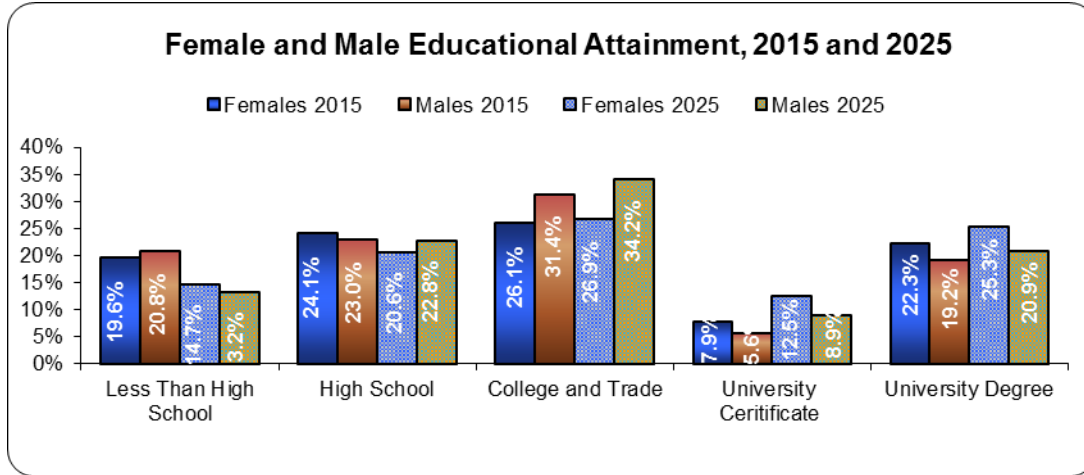


<sup>1</sup> Available at <http://work.alberta.ca/labour/labour-market-forecasts.html>

## Educational Attainment

Over the forecast period of 2015 to 2025, the proportion of people with a post-secondary education is expected to increase from 56% to 64%. Meanwhile, the other categories, less than high school and high school, are expected to decrease except for males with high school. Chart 1 shows the proportion of each gender projected to have attained each level of education in 2015 and 2025. It is expected that the proportion of females with post-secondary education in 2025 will exceed that of males, 64.1% compared to 64.1%.

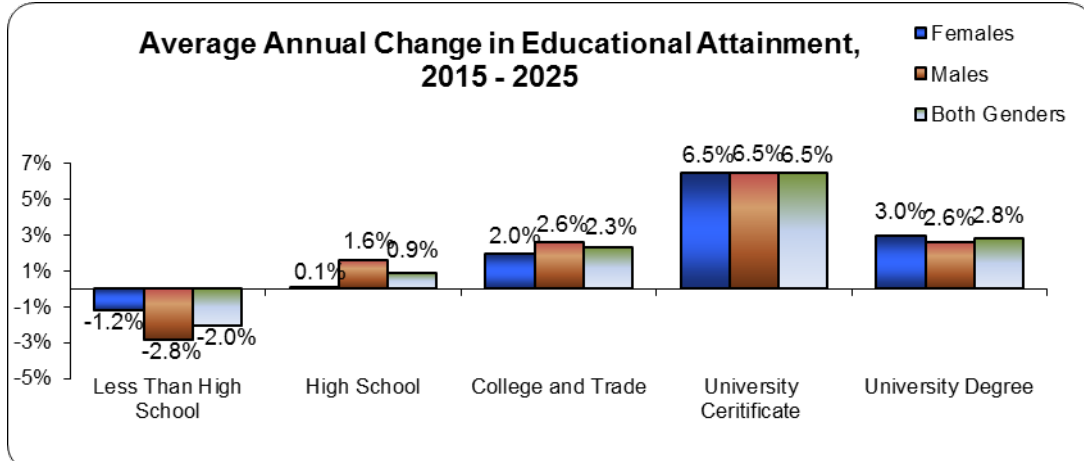
**Chart 1**



**Data Source:** Alberta's Occupational Supply Outlook Model, 2015-2025

Chart 2 shows the average annual change in educational attainment between 2015 and 2025 for males, females, and for both genders. Attainment of university certificates, 6.5% and degrees, 2.8% show the highest average annual change while less than high school attainment has the lowest, at -2.0%. Females are expected to have higher growth rates than males for university degrees. Males will see higher growth in college and trade and high school category.

**Chart 2**

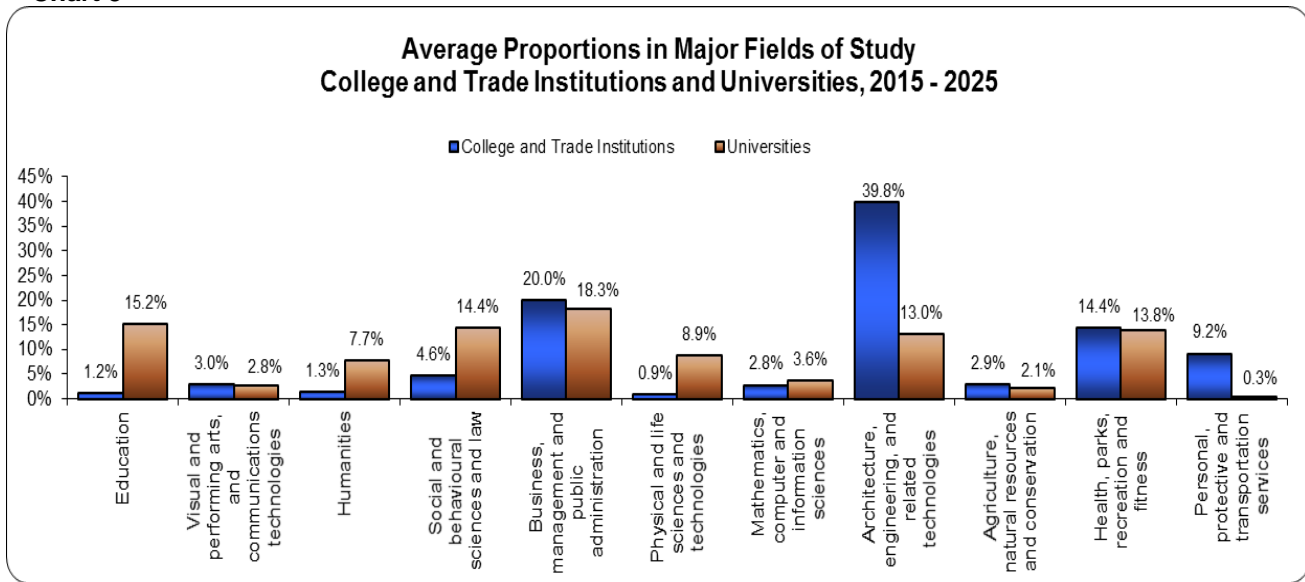


**Data Source:** Alberta's Occupational Supply Outlook Model, 2015-2025

## Major Fields of Study: College and Trade Institutions and Universities

Chart 3 compares the average proportions in each major field of study at college and trade institutions and at universities. Compared to college and trade institutions, universities will have higher proportions of graduates with education, humanities, social science, physical and life science, and mathematical and computer science qualifications. Conversely, college and trade institutions will graduate higher proportions in the fields of visual and performing arts, business, architecture and engineering, agriculture, health, and personal services. These differences persist over the forecast period of 2015 to 2025.

**Chart 3**

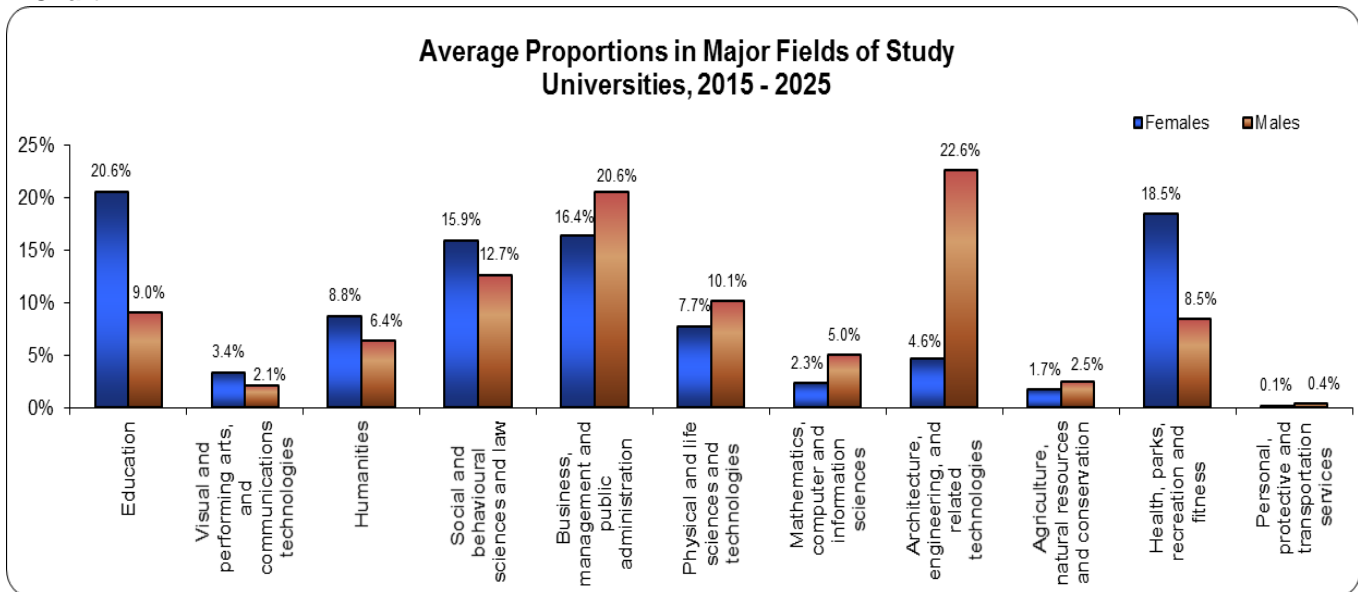


**Data Source:** Alberta's Occupational Supply Outlook Model, 2015-2025

## Major Fields of Study: Universities

Chart 4 shows the average proportions of all university graduates in each major field of study by gender for 2015 to 2025. A higher proportion of females than males is expected to graduate with qualifications in education, visual and performing arts, humanities, social science, and health. Males are expected to graduate in higher proportions in business, physical and life sciences, architecture and engineering, mathematical and computer sciences, agriculture, and personal services. This continues traditional gender patterns in fields of study.

Chart 4

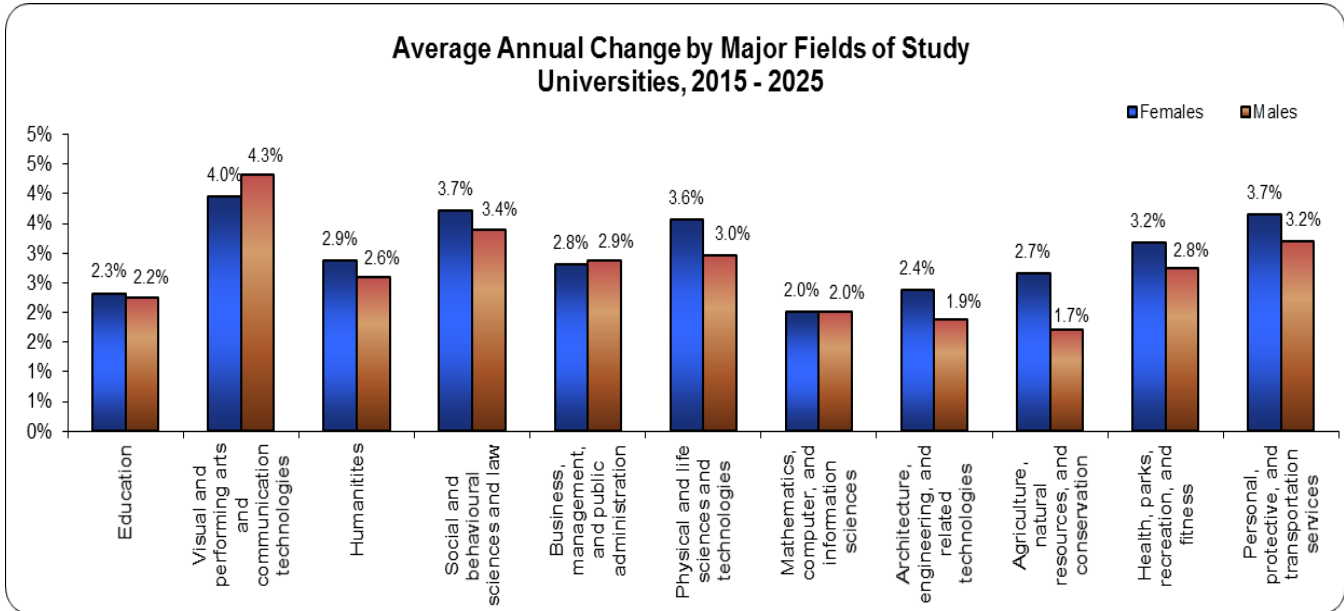


**Data Source:** Alberta's Occupational Supply Outlook Model, 2015-2025

Enrolment rates for females are expected to increase at a faster rate than for males over the forecast period, except in visual and performing arts, business, mathematical and computer sciences where male growth rates will exceed or equal female rates (Chart 5).

## Major Fields of Study: College and Trade Institutions

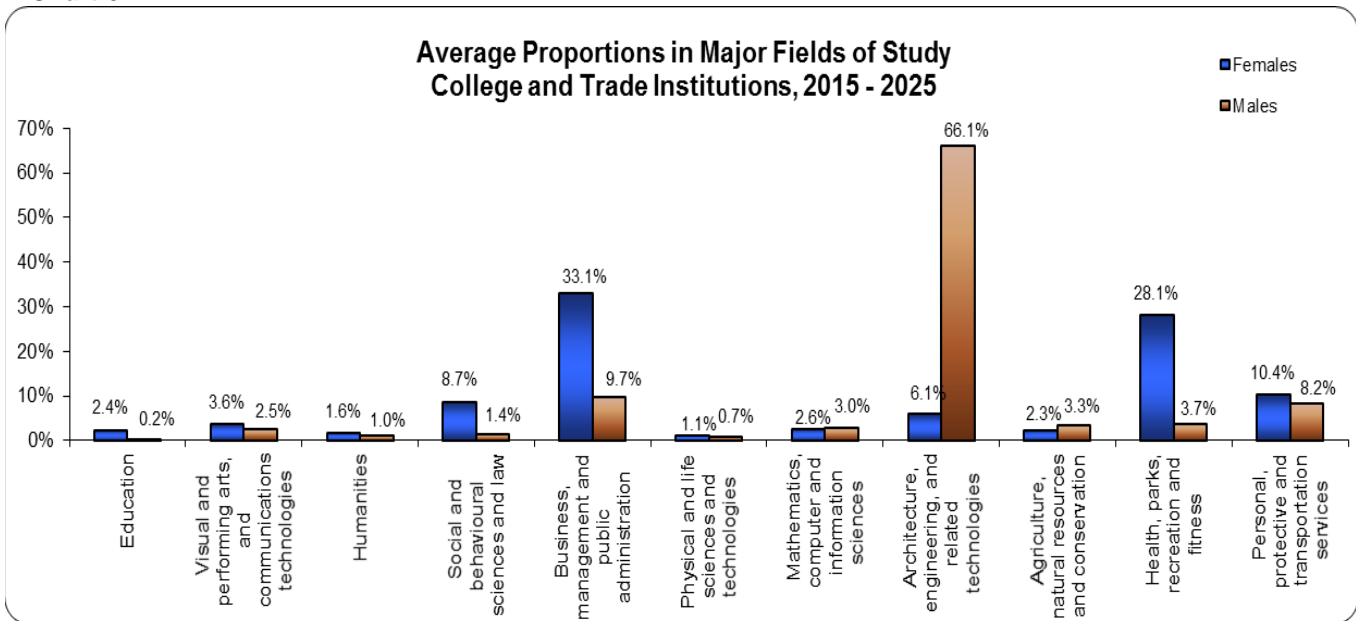
Chart 5



Data Source: Alberta's Occupational Supply Outlook Model, 2015-2025

Chart 6 compares the average proportions of all college and trade graduates in each major field of study by gender for 2015 to 2025. There are higher proportions of females than males with qualifications in most major fields of study, except for architecture and engineering, mathematics, computer and information science, and Agriculture, natural resources and conservation.

Chart 6

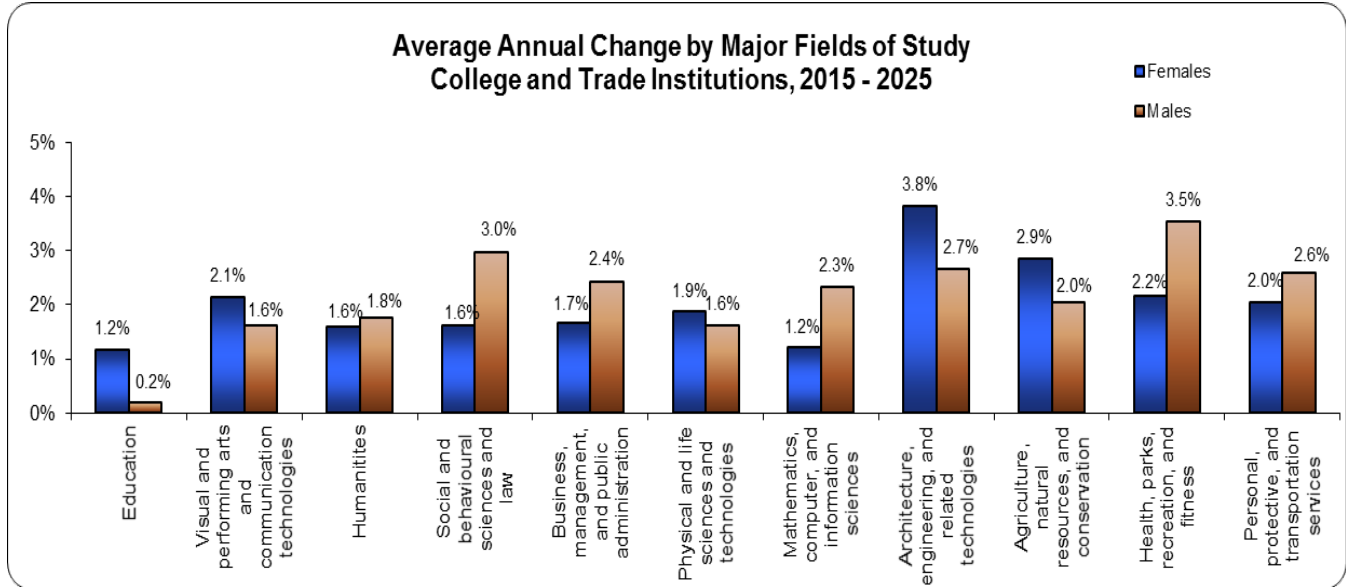


Data Source: Alberta's Occupational Supply Outlook Model, 2015-2025

## Major Fields of Study: College and Trade Institutions

Chart 7 shows that males are anticipated to have higher average annual growth rates than females in social science, health, business, humanities, mathematical and computer science, and personal service fields. Females are expected to have higher growth rates in education, visual and performing arts, physical and life sciences, architecture and engineering, and agriculture fields.

Chart 7



**Data Source:** Alberta's Occupational Supply Outlook Model, 2015-2025



## Summary and Conclusion

Over the coming decade, 2015 to 2025, the overall level of educational attainment in Alberta is expected to increase as more people enroll in post-secondary institutions raising from 56% in 2015 to 64% by 2025. The enrolment rates for females in post-secondary education will exceed that of males, resulting in a higher proportion of females having obtained a post-secondary education by 2025.

Compared to males, a higher proportion of females will be qualified in Education, 21% and Health, 19% at the universities. On the other hand, higher proportions of males will have qualifications in the Architecture, engineering, and related technologies, 23% and Business Management, 21%.

Among college and trade institutions, almost two-thirds or 66% of males will be qualified in Architecture, engineering, and related technologies, while, higher proportions of females will have qualifications in Business, management and public administration, 33% and health, 28%.

According to Alberta's Occupational Demand and Supply Outlook, 2015-2025 occupations related to health and natural and applied science major fields of study are expected to be in need of labour over the coming decade.

## Appendix A

### Major Fields of Study

- ✚ Education
- ✚ Visual and performing arts and communication technologies
- ✚ Humanities
- ✚ Social and behavioural sciences and law
- ✚ Business, management, and public administration
- ✚ Physical and life sciences and technologies
- ✚ Mathematics, computer, and information sciences
- ✚ Architecture, engineering, and related technologies
- ✚ Agriculture, natural resources, and conservation
- ✚ Health, parks, recreation, and fitness
- ✚ Personal, protective, and transportation services

## Appendix B

### Education Assumptions

A number of assumptions are used to derive the results of this forecast. The assumptions used to generate the results in Appendix C are described below.

#### Enrolment and Graduation

- The number of people who attend school is calculated as a share of the total number in that age or gender group. This proportion is based on historic shares.
- The secondary school enrolment rates for males and females over the forecast follow the historical trends from 2002-2003 to 2013-2014.
- Enrolment rates for post-secondary institutions over the forecast revert toward the average over the 2004-05 to 2013-2014 school years.
- Graduation rates are determined by level of schooling, major field of study, age and gender. Graduation rates are calculated as a share of those who could potentially graduate and are kept constant over the forecast period.
- The overall number of university, college and trades graduates is determined by applying the graduate rate to the different age groups who are enrolled in that institution and could potentially graduate.
- Drop-out rates and mature student rates are used for the different major fields of study and level of schooling.
- Migration rates by educational attainment are allowed to adjust to reflect relative demand conditions in Alberta.

#### Educational Attainment

- To calculate the number of people with university, college and trades, and high school education, a stock-flow approach<sup>3</sup> was used.

<sup>3</sup> **Stock-Flow Approach:** A method in estimating the future population of people in a group of interest. To find the forecasted population, the population from the previous year is adjusted to add those expected to enter that group and subtract those that are expected to leave that group. **Example:**

$$\begin{array}{ccccccc} \text{Number of} & & \text{Number of} & & \text{Recent} & & \text{People Leaving} \\ \text{people with} & & \text{people with} & \text{plus} & \text{Graduates of} & \text{minus} & \text{Group due to} \\ \text{College/Trades} & = & \text{College/Trades} & & \text{College/Trades} & & \text{death,} \\ \text{Training} & & \text{Training} & & & & \text{retirement, etc.} \\ t+1 & & t & & t+1 & & t+1 \end{array}$$

## Appendix B

- Those with less than a high school education are determined to be those not already accounted for in other educational attainment categories.
- Less than high school educational attainment is adjusted to reflect the estimated portion of mature students in post-secondary institutions that do not have a high school diploma. High school educational attainment is also adjusted to subtract recent graduates from university and college and trades.
- The overall enrolment rate for mature students is used for all age groups within the mature student category.
- To project educational attainment by major field of study, the historic relative enrolment rate is maintained over the projected period.
- The share of new graduates by major field of study is constant over time.
- University transfer programs are included as university enrollment and university certificates are classified as college and technical.
- Educational attainment is based on the new graduate forecast plus net inflows from migration less deaths.

## Appendix C

### Educational Attainment

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average 2015-2025
<b>Both Genders</b>												
<b>Less Than High School</b>	693,155	672,966	655,656	640,662	627,756	615,330	603,713	593,215	584,426	575,304	564,588	
% of Total	21.7%	20.8%	20.1%	19.4%	18.8%	18.2%	17.6%	17.1%	16.6%	16.1%	15.6%	
Growth Rate (%)		-2.9	-2.6	-2.3	-2.0	-2.0	-1.9	-1.7	-1.5	-1.6	-1.9	-2.0
<b>High School</b>	808,379	811,932	815,498	820,960	827,857	835,130	842,416	850,503	859,409	869,128	880,049	
% of Total	25.3%	25.1%	25.0%	24.9%	24.8%	24.7%	24.6%	24.5%	24.4%	24.3%	24.3%	
Growth Rate (%)		0.4	0.4	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.3	0.9
<b>College and Trade</b>	986,778	1,012,155	1,035,962	1,061,210	1,087,202	1,113,216	1,138,853	1,164,308	1,189,937	1,215,800	1,241,904	
% of Total	30.8%	31.3%	31.8%	32.2%	32.5%	32.9%	33.2%	33.5%	33.8%	34.0%	34.3%	
Growth Rate (%)		2.6	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.1	2.3
<b>University Degree</b>	710,632	732,255	753,206	775,253	798,113	821,195	844,060	866,875	889,918	913,258	936,912	
% of Total	22.2%	22.7%	23.1%	23.5%	23.9%	24.3%	24.6%	24.9%	25.3%	25.6%	25.9%	
Growth Rate (%)		3.0	2.9	2.9	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.8
<b>Females</b>												Average 2015-2025
<b>Less Than High School</b>	331,159	324,346	318,631	314,008	310,036	306,367	303,181	300,410	298,505	296,158	292,894	
% of Total	21.3%	20.7%	20.1%	19.6%	19.2%	18.7%	18.3%	17.9%	17.6%	17.2%	16.8%	
Growth Rate (%)		-2.1	-1.8	-1.5	-1.3	-1.2	-1.0	-0.9	-0.6	-0.8	-1.1	-1.2
<b>High School</b>	407,568	406,015	404,466	403,859	403,968	404,281	404,617	405,404	406,635	408,317	410,630	
% of Total	26.2%	25.9%	25.6%	25.3%	25.0%	24.7%	24.4%	24.2%	23.9%	23.7%	23.5%	
Growth Rate (%)		-0.4	-0.4	-0.2	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.1
<b>College and Trade</b>	440,260	449,154	457,669	466,933	476,700	486,548	496,255	505,954	515,813	525,872	536,124	
% of Total	28.3%	28.6%	28.9%	29.2%	29.5%	29.7%	30.0%	30.2%	30.4%	30.5%	30.7%	
Growth Rate (%)		2.0	1.9	2.0	2.1	2.1	2.0	2.0	1.9	2.0	1.9	2.0
<b>University Degree</b>	376,497	388,882	400,893	413,467	426,455	439,544	452,510	465,448	478,504	491,726	505,122	
% of Total	24.2%	24.8%	25.3%	25.9%	26.4%	26.9%	27.3%	27.8%	28.2%	28.6%	29.0%	
Growth Rate (%)		3.3	3.1	3.1	3.1	3.1	2.9	2.9	2.8	2.8	2.7	3.0
<b>Males</b>												Average 2015-2025
<b>Less Than High School</b>	361,996	348,620	337,026	326,654	317,720	308,963	300,532	292,805	285,921	279,146	271,695	
% of Total	22.0%	21.0%	20.1%	19.2%	18.4%	17.7%	17.0%	16.3%	15.7%	15.1%	14.5%	
Growth Rate (%)		-3.7	-3.3	-3.1	-2.7	-2.8	-2.7	-2.6	-2.4	-2.4	-2.7	-2.8
<b>High School</b>	400,811	405,918	411,032	417,101	423,889	430,848	437,799	445,099	452,774	460,812	469,420	
% of Total	24.4%	24.4%	24.5%	24.5%	24.6%	24.6%	24.7%	24.8%	24.8%	24.9%	25.0%	
Growth Rate (%)		1.3	1.3	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.9	1.6
<b>College and Trade</b>	546,518	563,001	578,293	594,277	610,501	626,667	642,598	658,354	674,124	689,928	705,780	
% of Total	33.3%	33.9%	34.4%	35.0%	35.4%	35.8%	36.3%	36.6%	37.0%	37.3%	37.6%	
Growth Rate (%)		3.0	2.7	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.6
<b>University Degree</b>	334,135	343,374	352,313	361,786	371,659	381,651	391,550	401,428	411,414	421,532	431,791	
% of Total	20.3%	20.7%	21.0%	21.3%	21.6%	21.8%	22.1%	22.3%	22.6%	22.8%	23.0%	
Growth Rate (%)		2.8	2.6	2.7	2.7	2.7	2.6	2.5	2.5	2.5	2.4	2.6

## Appendix C

### Major Fields of Study: Universities

<b>Both Genders</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average 2015-2025</b>
<b>Education</b>	110,829	113,516	116,103	118,863	121,746	124,659	127,534	130,399	133,291	136,219	139,183	
% of Total	15.6%	15.5%	15.4%	15.3%	15.3%	15.2%	15.1%	15.0%	15.0%	14.9%	14.9%	
Growth Rate (%)		2.4	2.3	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.3
<b>Visual and performing arts and communication technologies</b>	18,363	19,241	20,099	20,983	21,888	22,801	23,709	24,617	25,533	26,462	27,403	
% of Total	2.6%	2.6%	2.7%	2.7%	2.7%	2.8%	2.8%	2.8%	2.9%	2.9%	2.9%	
Growth Rate (%)		4.8	4.5	4.4	4.3	4.2	4.0	3.8	3.7	3.6	3.6	4.1
<b>Humanities</b>	54,579	56,210	57,790	59,454	61,182	62,928	64,657	66,385	68,130	69,899	71,693	
% of Total	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	
Growth Rate (%)		3.0	2.8	2.9	2.9	2.9	2.7	2.7	2.6	2.6	2.6	2.8
<b>Social and behavioural sciences and law</b>	98,207	102,216	106,126	110,183	114,354	118,559	122,735	126,905	131,113	135,370	139,682	
% of Total	13.8%	14.0%	14.1%	14.2%	14.3%	14.4%	14.5%	14.6%	14.7%	14.8%	14.9%	
Growth Rate (%)		4.1	3.8	3.8	3.8	3.7	3.5	3.4	3.3	3.2	3.2	3.6
<b>Business, management, and public administration</b>	130,063	134,076	137,970	142,067	146,317	150,608	154,862	159,108	163,395	167,737	172,135	
% of Total	18.3%	18.3%	18.3%	18.3%	18.3%	18.3%	18.3%	18.4%	18.4%	18.4%	18.4%	
Growth Rate (%)		3.1	2.9	3.0	3.0	2.9	2.8	2.7	2.7	2.7	2.6	2.8
<b>Physical and life sciences and technologies</b>	61,456	63,682	65,842	68,093	70,414	72,758	75,084	77,408	79,758	82,141	84,561	
% of Total	8.6%	8.7%	8.7%	8.8%	8.8%	8.9%	8.9%	8.9%	9.0%	9.0%	9.0%	
Growth Rate (%)		3.6	3.4	3.4	3.4	3.3	3.2	3.1	3.0	3.0	2.9	3.2
<b>Mathematics, computer, and information sciences</b>	26,466	27,016	27,543	28,111	28,709	29,313	29,909	30,502	31,101	31,709	32,325	
% of Total	3.7%	3.7%	3.7%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%	3.5%	
Growth Rate (%)		2.1	1.9	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0
<b>Architecture, engineering, and related technologies</b>	96,419	98,380	100,250	102,272	104,400	106,553	108,675	110,789	112,928	115,101	117,308	
% of Total	13.6%	13.4%	13.3%	13.2%	13.1%	13.0%	12.9%	12.8%	12.7%	12.6%	12.5%	
Growth Rate (%)		2.0	1.9	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	2.0
<b>Agriculture, natural resources, and conservation</b>	15,423	15,764	16,090	16,441	16,808	17,180	17,546	17,912	18,281	18,655	19,036	
% of Total	2.2%	2.2%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.0%	2.0%	
Growth Rate (%)		2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1
<b>Health, parks, recreation, and fitness</b>	96,823	100,075	103,239	106,554	109,981	113,439	116,867	120,289	123,741	127,234	130,769	
% of Total	13.6%	13.7%	13.7%	13.7%	13.8%	13.8%	13.8%	13.9%	13.9%	13.9%	14.0%	
Growth Rate (%)		3.4	3.2	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.8	3.1
<b>Personal, protective, and transportation services</b>	1,885	1,953	2,021	2,092	2,165	2,239	2,313	2,387	2,462	2,538	2,615	
% of Total	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	
Growth Rate (%)		3.6	3.5	3.5	3.5	3.4	3.3	3.2	3.1	3.1	3.0	3.3

## Appendix C

### Major Fields of Study: Universities (Cont.)

Females	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average 2015-2025
<b>Education</b>	71,587	74,088	76,595	79,108	81,600	84,082	86,544	88,992	91,418	93,801	96,138	
% of Total	17.8%	17.7%	17.5%	17.4%	17.3%	17.2%	17.1%	17.0%	16.9%	16.8%	16.7%	
Growth Rate (%)		3.5	3.4	3.3	3.2	3.0	2.9	2.8	2.7	2.6	2.5	3.0
<b>Visual and performing arts and communication technologies</b>	14,381	15,113	15,831	16,539	17,237	17,929	18,613	19,290	19,958	20,612	21,253	
% of Total	3.6%	3.6%	3.6%	3.6%	3.6%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	
Growth Rate (%)		5.1	4.8	4.5	4.2	4.0	3.8	3.6	3.5	3.3	3.1	4.0
<b>Humanities</b>	34,388	36,148	37,875	39,574	41,254	42,922	44,571	46,205	47,821	49,403	50,951	
% of Total	8.6%	8.6%	8.7%	8.7%	8.7%	8.8%	8.8%	8.8%	8.8%	8.9%	8.9%	
Growth Rate (%)		5.1	4.8	4.5	4.2	4.0	3.8	3.7	3.5	3.3	3.1	4.0
<b>Social and behavioural sciences and law</b>	64,082	67,524	70,979	74,433	77,847	81,236	84,584	87,900	91,175	94,383	97,525	
% of Total	15.9%	16.1%	16.2%	16.3%	16.5%	16.6%	16.7%	16.8%	16.8%	16.9%	17.0%	
Growth Rate (%)		5.4	5.1	4.9	4.6	4.4	4.1	3.9	3.7	3.5	3.3	4.3
<b>Business, management, and public administration</b>	74,811	78,139	81,444	84,706	87,935	91,147	94,327	97,483	100,607	103,672	106,676	
% of Total	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	
Growth Rate (%)		4.4	4.2	4.0	3.8	3.7	3.5	3.3	3.2	3.0	2.9	3.6
<b>Physical and life sciences and technologies</b>	26,614	27,893	29,162	30,417	31,656	32,884	34,095	35,291	36,471	37,626	38,755	
% of Total	6.6%	6.6%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	
Growth Rate (%)		4.8	4.5	4.3	4.1	3.9	3.7	3.5	3.3	3.2	3.0	3.8
<b>Mathematics, computer, and information sciences</b>	14,743	15,027	15,309	15,590	15,868	16,149	16,428	16,707	16,985	17,258	17,524	
% of Total	3.7%	3.6%	3.5%	3.4%	3.4%	3.3%	3.2%	3.2%	3.1%	3.1%	3.1%	
Growth Rate (%)		1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.5	1.7
<b>Architecture, engineering, and related technologies</b>	17,719	18,403	19,084	19,760	20,429	21,094	21,751	22,402	23,046	23,675	24,292	
% of Total	4.4%	4.4%	4.4%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.2%	4.2%	
Growth Rate (%)		3.9	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.7	2.6	3.2
<b>Agriculture, natural resources, and conservation</b>	6,842	7,118	7,396	7,675	7,952	8,227	8,499	8,769	9,035	9,296	9,551	
% of Total	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	
Growth Rate (%)		4.0	3.9	3.8	3.6	3.5	3.3	3.2	3.0	2.9	2.7	3.4
<b>Health, parks, recreation, and fitness</b>	75,572	79,117	82,678	86,227	89,740	93,225	96,670	100,077	103,440	106,737	109,970	
% of Total	18.8%	18.9%	18.9%	18.9%	19.0%	19.0%	19.0%	19.1%	19.1%	19.1%	19.2%	
Growth Rate (%)		4.7	4.5	4.3	4.1	3.9	3.7	3.5	3.4	3.2	3.0	3.8
<b>Personal, protective, and transportation services</b>	1,094	1,146	1,197	1,247	1,297	1,347	1,397	1,446	1,495	1,543	1,591	
% of Total	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	
Growth Rate (%)		4.8	4.5	4.2	4.0	3.9	3.7	3.5	3.4	3.2	3.1	3.8

## Appendix C

### Major Fields of Study: Universities (Cont.)

<b>Males</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average 2015-2025</b>
<b>Education</b>	30,767	31,485	32,178	32,920	33,699	34,489	35,269	36,046	36,831	37,625	38,428	
% of Total	9.2%	9.2%	9.1%	9.1%	9.1%	9.0%	9.0%	9.0%	9.0%	8.9%	8.9%	
Growth Rate (%)		2.3	2.2	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.2
<b>Visual and performing arts and communication technologies</b>	6,370	6,695	7,013	7,341	7,677	8,016	8,353	8,690	9,030	9,374	9,722	
% of Total	1.9%	1.9%	2.0%	2.0%	2.1%	2.1%	2.1%	2.2%	2.2%	2.2%	2.3%	
Growth Rate (%)		5.1	4.8	4.7	4.6	4.4	4.2	4.0	3.9	3.8	3.7	4.3
<b>Humanities</b>	21,392	21,980	22,549	23,154	23,785	24,425	25,060	25,695	26,337	26,988	27,648	
% of Total	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	
Growth Rate (%)		2.7	2.6	2.7	2.7	2.7	2.6	2.5	2.5	2.5	2.4	2.6
<b>Social and behavioural sciences and law</b>	40,616	42,159	43,665	45,235	46,855	48,493	50,119	51,743	53,383	55,041	56,721	
% of Total	12.2%	12.3%	12.4%	12.5%	12.6%	12.7%	12.8%	12.9%	13.0%	13.1%	13.1%	
Growth Rate (%)		3.8	3.6	3.6	3.6	3.5	3.4	3.2	3.2	3.1	3.1	3.4
<b>Business, management, and public administration</b>	67,756	69,870	71,922	74,081	76,319	78,580	80,821	83,056	85,312	87,593	89,903	
% of Total	20.3%	20.3%	20.4%	20.5%	20.5%	20.6%	20.6%	20.7%	20.7%	20.8%	20.8%	
Growth Rate (%)		3.1	2.9	3.0	3.0	3.0	2.9	2.8	2.7	2.7	2.6	2.9
<b>Physical and life sciences and technologies</b>	33,239	34,311	35,350	36,439	37,568	38,711	39,847	40,984	42,134	43,301	44,487	
% of Total	9.9%	10.0%	10.0%	10.1%	10.1%	10.1%	10.2%	10.2%	10.2%	10.3%	10.3%	
Growth Rate (%)		3.2	3.0	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	3.0
<b>Mathematics, computer, and information sciences</b>	17,278	17,640	17,986	18,358	18,750	19,146	19,536	19,923	20,314	20,710	21,110	
% of Total	5.2%	5.1%	5.1%	5.1%	5.0%	5.0%	5.0%	5.0%	4.9%	4.9%	4.9%	
Growth Rate (%)		2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0
<b>Architecture, engineering, and related technologies</b>	78,399	79,896	81,323	82,876	84,518	86,183	87,825	89,462	91,122	92,810	94,526	
% of Total	23.5%	23.3%	23.1%	22.9%	22.7%	22.6%	22.4%	22.3%	22.1%	22.0%	21.9%	
Growth Rate (%)		1.9	1.8	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.9
<b>Agriculture, natural resources, and conservation</b>	8,870	9,017	9,157	9,313	9,479	9,649	9,817	9,985	10,156	10,332	10,511	
% of Total	2.7%	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%	2.4%	
Growth Rate (%)		1.7	1.6	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7
<b>Health, parks, recreation, and fitness</b>	28,042	28,863	29,664	30,511	31,394	32,290	33,178	34,064	34,960	35,867	36,785	
% of Total	8.4%	8.4%	8.4%	8.4%	8.4%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	
Growth Rate (%)		2.9	2.8	2.9	2.9	2.9	2.8	2.7	2.6	2.6	2.6	2.8
<b>Personal, protective, and transportation services</b>	1,344	1,390	1,436	1,484	1,534	1,584	1,635	1,685	1,736	1,788	1,841	
% of Total	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	
Growth Rate (%)		3.5	3.3	3.3	3.4	3.3	3.2	3.1	3.0	3.0	2.9	3.2



## Appendix C

### Major Fields of Study: College and Trade Institutions

Both Genders	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average 2015-2025
<b>Education</b>	11,889	12,153	12,408	12,668	12,927	13,185	13,442	13,697	13,951	14,202	14,447	
% of Total	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	
Growth Rate (%)		2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.7	2.0
<b>Visual and performing arts and communication technologies</b>	29,731	30,464	31,163	31,886	32,621	33,355	34,075	34,788	35,498	36,198	36,890	
% of Total	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.0%	3.0%	3.0%	
Growth Rate (%)		2.5	2.3	2.3	2.3	2.2	2.2	2.1	2.0	2.0	1.9	2.2
<b>Humanities</b>	14,503	14,870	15,214	15,567	15,925	16,283	16,636	16,988	17,338	17,683	18,021	
% of Total	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Growth Rate (%)		2.5	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.0	1.9	2.2
<b>Social and behavioural sciences and law</b>	41,874	43,133	44,361	45,594	46,825	48,051	49,261	50,463	51,657	52,829	53,982	
% of Total	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	
Growth Rate (%)		3.0	2.8	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.6
<b>Business, management, and public administration</b>	189,306	192,899	196,360	199,919	203,535	207,156	210,721	214,264	217,804	221,306	224,772	
% of Total	19.7%	19.5%	19.4%	19.3%	19.1%	19.0%	18.9%	18.8%	18.7%	18.6%	18.5%	
Growth Rate (%)		1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.7
<b>Physical and life sciences and technologies</b>	8,373	8,538	8,697	8,864	9,034	9,205	9,372	9,538	9,705	9,870	10,033	
% of Total	0.9%	0.9%	0.9%	0.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	
Growth Rate (%)		2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.8
<b>Mathematics, computer, and information sciences</b>	35,345	35,782	36,198	36,651	37,125	37,601	38,065	38,524	38,986	39,446	39,903	
% of Total	3.7%	3.6%	3.6%	3.5%	3.5%	3.5%	3.4%	3.4%	3.3%	3.3%	3.3%	
Growth Rate (%)		1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2
<b>Architecture, engineering, and related technologies</b>	381,602	393,847	405,116	416,808	428,547	440,222	451,776	463,215	474,643	486,063	497,475	
% of Total	39.7%	39.9%	40.0%	40.2%	40.3%	40.4%	40.5%	40.7%	40.8%	40.9%	41.0%	
Growth Rate (%)		3.2	2.9	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.7
<b>Agriculture, natural resources, and conservation</b>	26,977	27,591	28,177	28,785	29,403	30,019	30,619	31,209	31,798	32,386	32,975	
% of Total	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.7%	2.7%	2.7%	2.7%	2.7%	
Growth Rate (%)		2.3	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.8	2.0
<b>Health, parks, recreation, and fitness</b>	133,618	137,695	141,677	145,715	149,781	153,837	157,850	161,849	165,847	169,822	173,776	
% of Total	13.9%	13.9%	14.0%	14.0%	14.1%	14.1%	14.2%	14.2%	14.2%	14.3%	14.3%	
Growth Rate (%)		3.1	2.9	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.7
<b>Personal, protective, and transportation services</b>	88,865	91,161	93,303	95,561	97,917	100,279	102,603	104,903	107,207	109,514	111,824	
% of Total	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	
Growth Rate (%)		2.6	2.3	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.1	2.3

## Appendix C

### Major Fields of Study: College and Trade Institutions (Cont.)

Females	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average 2015-2025
<b>Education</b>	10,687	10,953	11,211	11,470	11,726	11,981	12,234	12,486	12,736	12,982	13,221	
% of Total	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	
Growth Rate (%)		2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	1.9	1.8	2.2
<b>Visual and performing arts and communication technologies</b>	15,264	15,760	16,237	16,712	17,182	17,649	18,110	18,566	19,018	19,457	19,885	
% of Total	3.7%	3.7%	3.7%	3.8%	3.8%	3.8%	3.8%	3.9%	3.9%	3.9%	3.9%	
Growth Rate (%)		3.3	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.7
<b>Humanities</b>	8,699	8,963	9,209	9,454	9,696	9,937	10,177	10,416	10,653	10,882	11,103	
% of Total	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.2%	2.2%	2.2%	2.2%	2.2%	
Growth Rate (%)		3.0	2.7	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.0	2.5
<b>Social and behavioural sciences and law</b>	34,228	35,223	36,197	37,169	38,134	39,096	40,048	40,995	41,934	42,849	43,744	
% of Total	8.2%	8.3%	8.3%	8.4%	8.4%	8.5%	8.5%	8.5%	8.6%	8.6%	8.6%	
Growth Rate (%)		2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.1	2.5
<b>Business, management, and public administration</b>	135,543	137,709	139,799	141,910	144,025	146,140	148,231	150,316	152,391	154,415	156,390	
% of Total	32.6%	32.4%	32.2%	32.0%	31.8%	31.6%	31.4%	31.2%	31.1%	30.9%	30.8%	
Growth Rate (%)		1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.4
<b>Physical and life sciences and technologies</b>	4,222	4,321	4,416	4,513	4,608	4,704	4,797	4,892	4,985	5,076	5,163	
% of Total	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
Growth Rate (%)		2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.8	1.7	2.0
<b>Mathematics, computer, and information sciences</b>	18,827	18,857	18,882	18,909	18,939	18,969	18,999	19,031	19,063	19,091	19,114	
% of Total	4.5%	4.4%	4.3%	4.3%	4.2%	4.1%	4.0%	4.0%	3.9%	3.8%	3.8%	
Growth Rate (%)		0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2
<b>Architecture, engineering, and related technologies</b>	21,968	22,757	23,528	24,312	25,099	25,887	26,679	27,474	28,273	29,073	29,874	
% of Total	5.3%	5.4%	5.4%	5.5%	5.5%	5.6%	5.7%	5.7%	5.8%	5.8%	5.9%	
Growth Rate (%)		3.6	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.8	2.8	3.1
<b>Agriculture, natural resources, and conservation</b>	8,218	8,404	8,588	8,773	8,956	9,137	9,315	9,491	9,664	9,834	10,000	
% of Total	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Growth Rate (%)		2.3	2.2	2.2	2.1	2.0	1.9	1.9	1.8	1.8	1.7	2.0
<b>Health, parks, recreation, and fitness</b>	114,149	117,429	120,634	123,869	127,112	130,348	133,553	136,746	139,931	143,079	146,192	
% of Total	27.5%	27.6%	27.8%	27.9%	28.1%	28.2%	28.3%	28.4%	28.5%	28.7%	28.8%	
Growth Rate (%)		2.9	2.7	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.5
<b>Personal, protective, and transportation services</b>	43,760	44,756	45,679	46,650	47,662	48,677	49,678	50,670	51,662	52,651	53,633	
% of Total	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.6%	
Growth Rate (%)		2.3	2.1	2.1	2.2	2.1	2.1	2.0	2.0	1.9	1.9	2.1

## Appendix C

### Major Fields of Study: College and Trade Institutions (Cont.)

Males	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average 2015-2025
<b>Education</b>	1,202	1,200	1,197	1,198	1,200	1,204	1,207	1,211	1,215	1,220	1,226	
% of Total	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Growth Rate (%)		-0.2	-0.2	0.0	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.2
<b>Visual and performing arts and communication technologies</b>	14,467	14,703	14,926	15,174	15,439	15,705	15,965	16,222	16,480	16,741	17,005	
% of Total	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%	2.4%	2.4%	2.4%	
Growth Rate (%)		1.6	1.5	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6
<b>Humanities</b>	5,805	5,907	6,005	6,113	6,229	6,346	6,459	6,572	6,685	6,801	6,919	
% of Total	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
Growth Rate (%)		1.8	1.7	1.8	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.8
<b>Social and behavioural sciences and law</b>	7,646	7,911	8,164	8,425	8,690	8,954	9,213	9,468	9,723	9,980	10,238	
% of Total	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.5%	
Growth Rate (%)		3.5	3.2	3.2	3.2	3.0	2.9	2.8	2.7	2.6	2.6	3.0
<b>Business, management, and public administration</b>	53,763	55,191	56,561	58,009	59,510	61,016	62,490	63,948	65,413	66,890	68,382	
% of Total	9.8%	9.8%	9.8%	9.8%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	
Growth Rate (%)		2.7	2.5	2.6	2.6	2.5	2.4	2.3	2.3	2.3	2.2	2.4
<b>Physical and life sciences and technologies</b>	4,151	4,218	4,281	4,351	4,426	4,502	4,575	4,647	4,720	4,794	4,869	
% of Total	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	
Growth Rate (%)		1.6	1.5	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6
<b>Mathematics, computer, and information sciences</b>	16,518	16,924	17,316	17,741	18,187	18,632	19,066	19,494	19,923	20,355	20,790	
% of Total	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	
Growth Rate (%)		2.5	2.3	2.5	2.5	2.5	2.3	2.2	2.2	2.2	2.1	2.3
<b>Architecture, engineering, and related technologies</b>	359,634	371,090	381,588	392,495	403,448	414,335	425,097	435,740	446,370	456,990	467,601	
% of Total	65.8%	65.9%	66.0%	66.0%	66.1%	66.1%	66.2%	66.2%	66.2%	66.2%	66.3%	
Growth Rate (%)		3.2	2.8	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.7
<b>Agriculture, natural resources, and conservation</b>	18,758	19,186	19,588	20,012	20,447	20,882	21,304	21,718	22,134	22,553	22,975	
% of Total	3.4%	3.4%	3.4%	3.4%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	
Growth Rate (%)		2.3	2.1	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	2.0
<b>Health, parks, recreation, and fitness</b>	19,469	20,266	21,043	21,847	22,669	23,489	24,297	25,102	25,916	26,743	27,584	
% of Total	3.6%	3.6%	3.6%	3.7%	3.7%	3.7%	3.8%	3.8%	3.8%	3.9%	3.9%	
Growth Rate (%)		4.1	3.8	3.8	3.8	3.6	3.4	3.3	3.2	3.2	3.1	3.5
<b>Personal, protective, and transportation services</b>	45,105	46,406	47,624	48,911	50,255	51,602	52,925	54,233	55,545	56,863	58,191	
% of Total	8.3%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	
Growth Rate (%)		2.9	2.6	2.7	2.7	2.7	2.6	2.5	2.4	2.4	2.3	2.6