

# Ontario Labour Market Report

CIP Program 26.15: Neurobiology and Neuroscience

Most Relevant Academic Program(s) at Brock: Neuroscience

EMSI Q3 2016 Data Set

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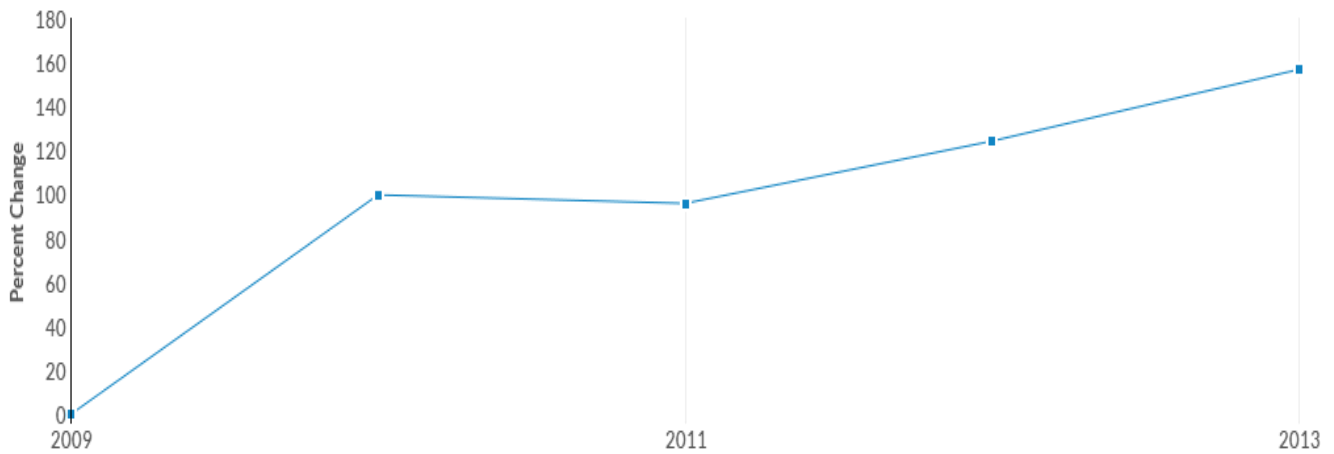
*\*\*Includes Description, Skills & Competencies, Ontario Trends in Field, Location of Job, Industries*

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# Section 1: Program Overview for Neuroscience (26.15)

<b>14</b> Ontario Institutions had Completions in the last 5 years	<b>288</b> Ontario Program Completions (2013)
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a) How many completions have there been in Ontario compared to Canada? (26.15)



Region	2009 Completions	2013 Completions	% Change
• Ontario	0	288	N/A
• Canada	231	594	156.9%

b) What types of degrees are coming from Ontario? (26.15)



Award Level	Completions (2013)	Percent
• Bachelors degree	198	68.8%
• Masters Degree	65	22.6%
• Doctors Degree	25	8.6%

### c) What other similar programs are offered in Ontario?

<b>29</b> Programs (2013)		<b>13,815</b> Completions (2013)
CIP Code	Program	Completions (2013)
26.01	Biology, general	3,821
51.11	Health/medical preparatory programs	1,312
51.00	Health services/allied health/health sciences, general	1,060
51.08	Allied health and medical assisting services	1,047
51.09	Allied health diagnostic, intervention and treatment professions	1,032

### d) What other similar programs are offered at Brock University?

**Biological Sciences<sup>1</sup>** - The biological sciences, or the life sciences, encompass a broad spectrum of subjects from molecular biology to ecology as well as such disciplines as biochemistry, biophysics, genetics and physiology. The program is designed to provide the student with a broad base in modern biological thought, to fulfill the basic requirements for admission to professional and advanced degree studies and to prepare graduates for careers in the biological sciences and related fields. Although the undergraduate program provides students with flexibility in selecting the areas of biology most compatible with their interests and skills, it also ensures that students develop an overview of the major concepts and problems of modern biology as expressed at all levels of biological organization.

**Biomedical Sciences<sup>2</sup>** - The main focus of the Biomedical Sciences program is on the molecular basis of human health. It draws on the expertise of faculty in Health Sciences in the medical aspects of human health and of faculty in Biological Sciences in the theory, methods, and applications of molecular biology. This program will prepare students for careers in biomedical research, teaching or professional programs in health sciences.

**Medical Sciences<sup>3</sup>** - The Honours BSc in Medical Sciences<sup>3</sup> prepares students for careers in health professions with a bio-science perspective. This pre-health professional degree allows students to meet the requirements of postgraduate programs in medicine, dentistry, optometry, chiropractic and the allied health professions.

## Section 2: Target Occupations

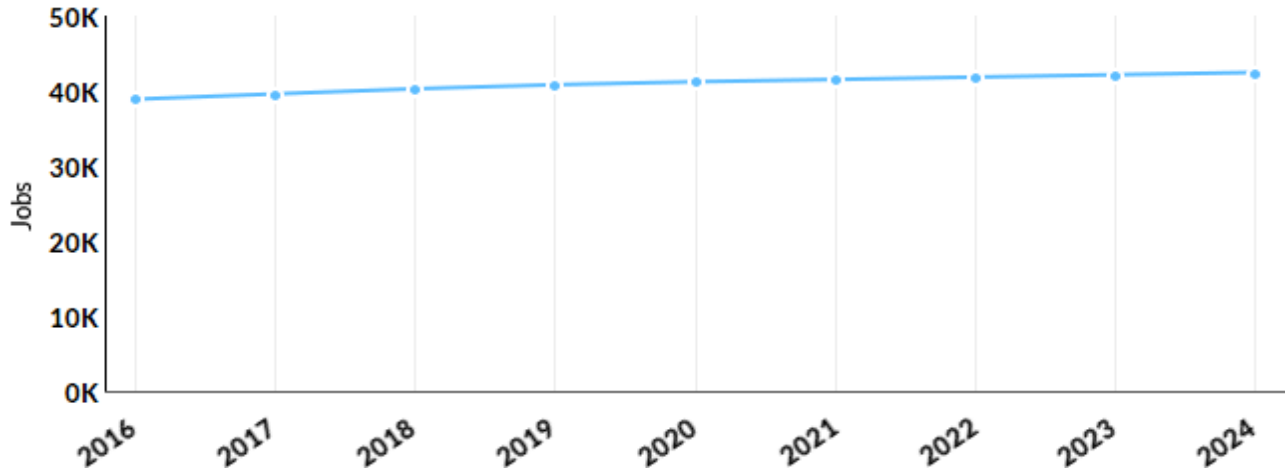
### a) Which top growing jobs are obtained by Alumni?

Occupation	2016 Jobs <sup>7</sup>	Median Hourly Wages <sup>8</sup>	Growth (2016 - 2024)	Location Quotient <sup>4</sup> (2016)
Medical laboratory technicians and pathologists' assistants	12,788	\$24.00/hr	3.81%	1.03
Medical administrative assistants	12,075	\$21.63/hr	6.51%	0.82
Biologists and related scientists	6,742	\$35.90/hr	14.97%	0.96
Biological technologists and technicians	4,622	\$20.51/hr	18.00%	0.83
Statistical officers and related research support occupations	2,640	\$37.61/hr	17.20%	1.13



## b) What are the growth prospects for these target occupations?

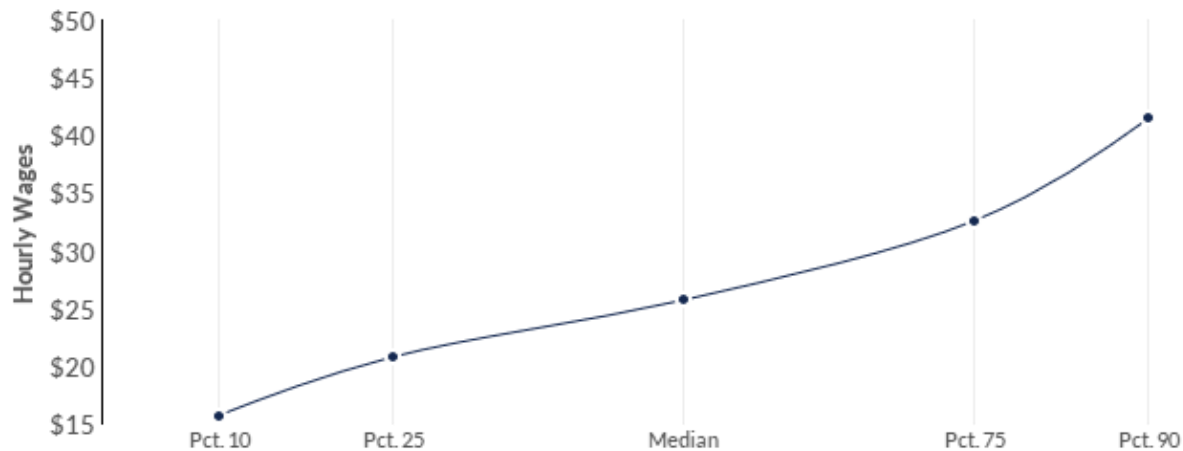
<b>38,867</b> 2016 Jobs <sup>7</sup>	<b>42,435</b> 2024 Jobs <sup>7</sup>	<b>3,568</b> Change (2016-2024)	<b>9.2%</b> % Change (2016-2024)
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Occupation	2016 Jobs <sup>7</sup>	2024 Jobs <sup>7</sup>	Change	% Change
Medical administrative assistants (1243)	12,075	12,861	786	7%
Statistical officers and related research support occupations (1254)	2,640	3,094	454	17%
Biologists and related scientists (2121)	6,742	7,751	1,009	15%
Biological technologists and technicians (2221)	4,622	5,454	832	18%
Medical laboratory technicians and pathologists' assistants (3212)	12,788	13,275	487	4%

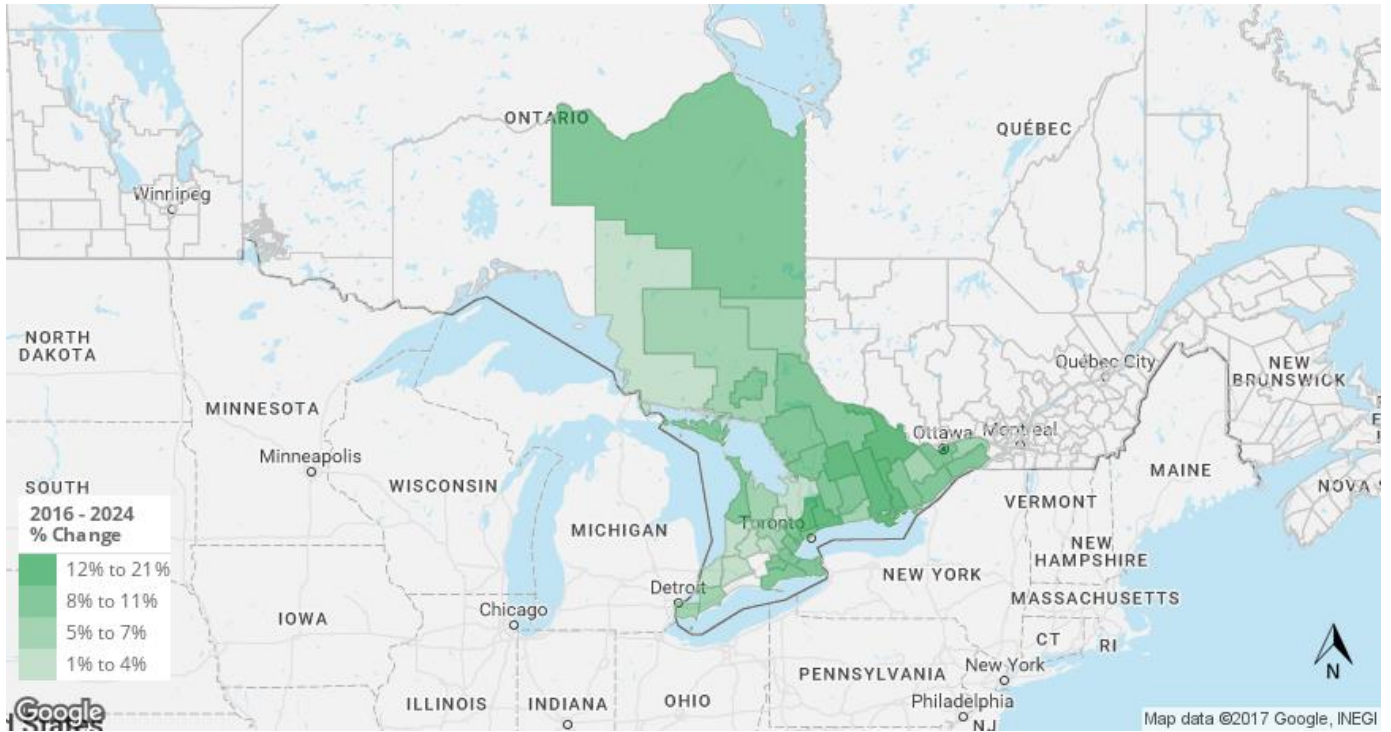
### c) How much are these target occupations earning?

<b>\$20.79/hr</b> 25th Percentile Wages <sup>8</sup>	<b>\$25.72/hr</b> Median Wages <sup>8</sup>	<b>\$32.60/hr</b> 75th Percentile Wages <sup>8</sup>
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Occupation	25th Percentile Wages <sup>8</sup>	Median Wages <sup>8</sup>	75th Percentile Wages <sup>8</sup>
Medical administrative assistants (1243)	\$17.00	\$21.63	\$25.00
Statistical officers and related research support occupations (1254)	\$33.23	\$37.61	\$44.26
Biologists and related scientists (2121)	\$31.11	\$35.90	\$48.08
Biological technologists and technicians (2221)	\$17.00	\$20.51	\$26.00
Medical laboratory technicians and pathologists' assistants (3212)	\$18.13	\$24.00	\$32.00

### d) Where are the hottest places in Ontario in terms of job growth?



Census Division	Census Division Name	2016 Jobs <sup>7</sup>	2024 Jobs <sup>7</sup>	2016 - 2024 Change	2016 - 2024 % Change	Expected Change	2016 Location Quotient <sup>4</sup>	2024 Location Quotient <sup>4</sup>	2015 Avg. Hourly Wages <sup>8</sup>
3511	Lennox and Addington	82	99	17	21%	6	1.05	1.17	\$22.72
3546	Haliburton	43	51	8	19%	4	1.15	1.21	\$28.48
3512	Hastings	401	459	58	14%	29	0.92	0.98	\$24.00
3547	Renfrew	380	432	52	14%	28	1.27	1.34	\$25.63
3519	York	2,407	2,727	320	13%	175	0.72	0.75	\$24.86
3518	Durham	1,302	1,471	169	13%	94	0.96	1.01	\$24.18
3513	Prince Edward	43	48	5	12%	4	1.05	1.09	\$22.31
3524	Halton	1,116	1,243	127	11%	81	0.70	0.72	\$26.44
3506	Ottawa	5,261	5,858	597	11%	381	1.47	1.53	\$34.17
3528	Haldimand-Norfolk	169	188	19	11%	12	0.67	0.69	\$29.54
3507	Leeds and Grenville	198	220	22	11%	15	0.78	0.81	\$32.29



Census Division	Census Division Name	2016 Jobs <sup>7</sup>	2024 Jobs <sup>7</sup>	2016 - 2024 Change	2016 - 2024 % Change	Expected Change	2016 Location Quotient <sup>4</sup>	2024 Location Quotient <sup>4</sup>	2015 Avg. Hourly Wages <sup>8</sup>
3521	Peel	3,883	4,313	430	11%	281	0.85	0.88	\$25.23
3510	Frontenac	641	708	67	10%	46	1.20	1.25	\$24.64
3529	Brant	265	292	27	10%	19	0.65	0.67	\$29.66
3520	Toronto	10,541	11,598	1,057	10%	762	1.03	1.05	\$25.16
3515	Peterborough	483	531	48	10%	35	1.19	1.21	\$27.13
3549	Parry Sound	73	80	7	10%	5	0.89	0.90	\$23.49
3551	Manitoulin	53	58	5	9%	4	1.44	1.45	\$23.63
3501	Stormont, Dundas and Glengarry	233	254	21	9%	17	0.81	0.82	\$30.79
3556	Cochrane	261	284	23	9%	18	0.99	1.00	\$24.29
3548	Nipissing	308	335	27	9%	22	1.10	1.10	\$24.45
3526	Niagara	784	850	66	8%	56	0.65	0.67	\$29.44
3541	Bruce	120	130	10	8%	9	0.58	0.58	\$23.18
3544	Muskoka	153	165	12	8%	11	0.94	0.96	\$26.24
3516	Kawartha Lakes	154	166	12	8%	11	1.07	1.07	\$27.75
3525	Hamilton	1,560	1,680	120	8%	112	1.08	1.08	\$28.38
3553	Greater Sudbury / Grand Sudbury	572	615	43	8%	41	1.04	1.03	\$24.45

Brock University students have been successful with finding employment within our local Hamilton-Niagara region and Toronto.

# Section 3: Top Three Job Occupation Summaries

## a) Medical Laboratory Technician and Pathologists' Assistant

Medical laboratory technicians conduct routine medical laboratory tests and set up, clean and maintain medical laboratory equipment. They are employed in medical laboratories in hospitals, clinics, research facilities, post-secondary educational institutions and government research laboratories. Pathologists' assistants assist at autopsies and examinations of surgical specimens or perform autopsies under a pathologist's supervision. They are usually employed in hospitals and universities<sup>5</sup>.

### Technology Skills Required <sup>6</sup>:

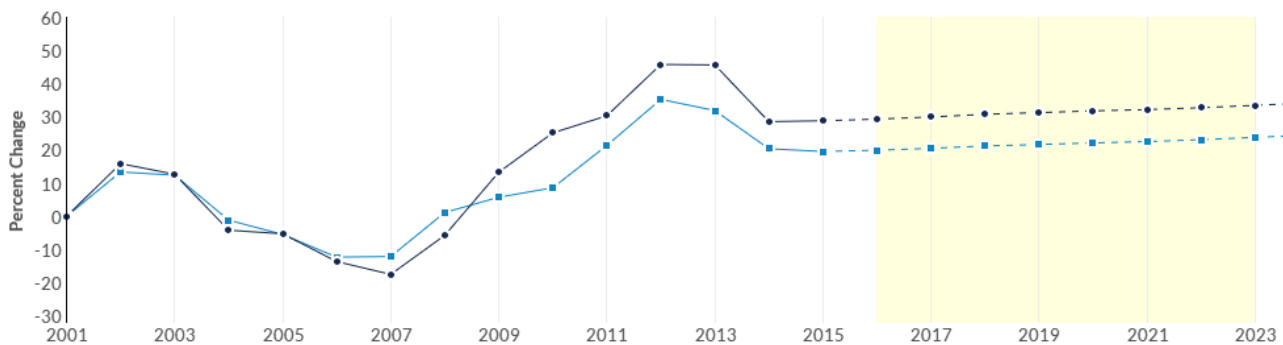
- Medical Software: Electronic medical record EMR software, MEDITECH Software, Test result delivery software, Test routing software
- Spreadsheet Software: Microsoft Excel
- Accounting Software: Billing Software

### Skills & Abilities Required <sup>6</sup>:

- Near Vision: Seeing details at close range
- Science: using scientific rules to and methods to solve problems
- Critical Thinking: using logic and reasoning to identify the strengths and weaknesses of alternative solutions

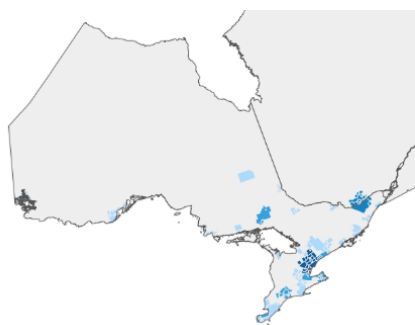
<b>12,740</b> <b>Jobs<sup>7</sup> (2015)</b> 3% above Canada's average	<b>3.2%</b> <b>% Change (2016-2023)</b> Canada: 3.2%	<b>\$24.00/hr</b> <b>Median Hourly Wages<sup>8</sup></b> Canada: \$24.90/hr
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## Ontario Trends



Region	2016 Jobs <sup>7</sup>	2023 Jobs <sup>7</sup>	Change	% Change
• Ontario	12,788	13,199	411	3.2%
• Canada	32,461	33,510	1,049	3.2%

## Where are the most jobs in Ontario for Medical Laboratory Technicians and Pathologists' Assistants?



Census Metropolitan Aggregate	2023 Jobs <sup>7</sup>
Toronto	6,493
Ottawa - Gatineau	1,633
Hamilton	945
London	632
St. Catharines - Niagara	340

## Who are employing Medical Laboratory Technicians and Pathologists' Assistants?

Industry	Occupation Jobs <sup>7</sup> in Industry (2015)	% of Occupation in Industry (2015)	% of Total Jobs <sup>7</sup> in Industry (2015)
General medical and surgical hospitals	4,543	35.7%	2.3%
Medical and diagnostic laboratories	4,452	34.9%	39.1%
Scientific research and development services	558	4.4%	1.9%
Offices of physicians	411	3.2%	0.9%
Other ambulatory health care services	330	2.6%	6.0%

## b) Medical Administrative Assistant

Medical administrative assistants perform a variety of secretarial and administrative duties in doctor's offices, hospitals, medical clinics and other medical settings<sup>5</sup>.

### Technology Skills Required<sup>6</sup>:

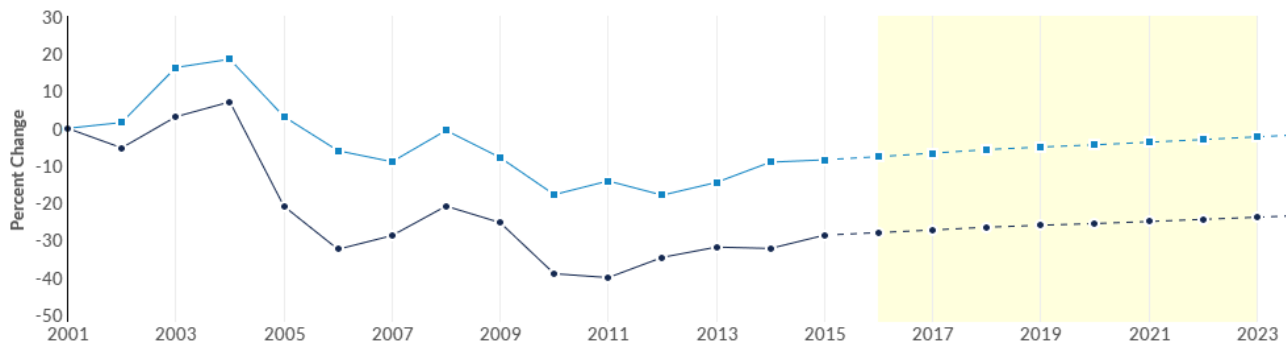
- Medical Software: Electronic medical record EMR software, MEDITECH Software, Patient management software, Visual electro diagnostic software
- Office Suite Software: Business software application, Microsoft Office
- Accounting Software: Billing Software, Bookkeeping Software

### Skills & Abilities Required<sup>6</sup>:

- Social Perceptiveness: being aware of others' reaction and understanding why they react as they do
- Near Vision: seeing details at close range
- Oral Expression: communicating information and ideas clearly

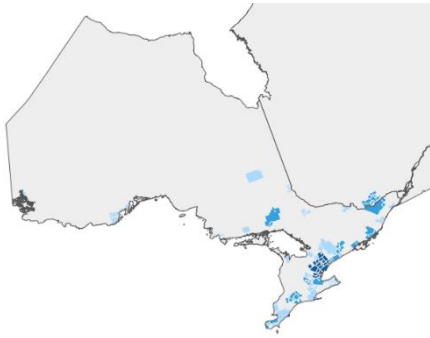
<b>11,960</b> <b>Jobs<sup>7</sup> (2015)</b> 18% below Canada's average	<b>5.7%</b> <b>% Change (2016-2023)</b> Canada: 5.7%	<b>\$21.63/hr</b> <b>Median Hourly Wages<sup>8</sup></b> Canada: \$20.16/hr
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## Ontario Trends



Region	2016 Jobs <sup>7</sup>	2023 Jobs <sup>7</sup>	Change	% Change
• Ontario	12,075	12,767	692	5.7%
• Canada	38,424	40,632	2,208	5.7%

## Where are the most jobs in Ontario for Medical Administrative Assistants?



Census Metropolitan Aggregate	2023 Jobs <sup>7</sup>
Toronto	7,455
Ottawa - Gatineau	476
Oshawa	427
London	421
Kingston	342

## Who are employing Medical Administrative Assistants?

Industry	Occupation Jobs <sup>7</sup> in Industry (2015)	% of Occupation in Industry (2015)	% of Total Jobs <sup>7</sup> in Industry (2015)
Offices of physicians	7,070	59.1%	15.0%
General medical and surgical hospitals	2,442	20.4%	1.3%
Out-patient care centres	469	3.9%	1.5%
Offices of other health practitioners	449	3.8%	1.5%
Offices of dentists	249	2.1%	0.6%

### c) Biologist and Related Scientist

**Biologists and related scientists conduct basic and applied research to extend knowledge of living organisms, to manage natural resources, and to develop new practices and products related to medicine and agriculture. They are employed in both laboratory and field settings by governments, environmental consulting companies, resource and utilities companies, chemical, pharmaceutical and biotechnical companies and health and educational institutions<sup>5</sup>.**

#### Technology Skills Required<sup>6</sup>:

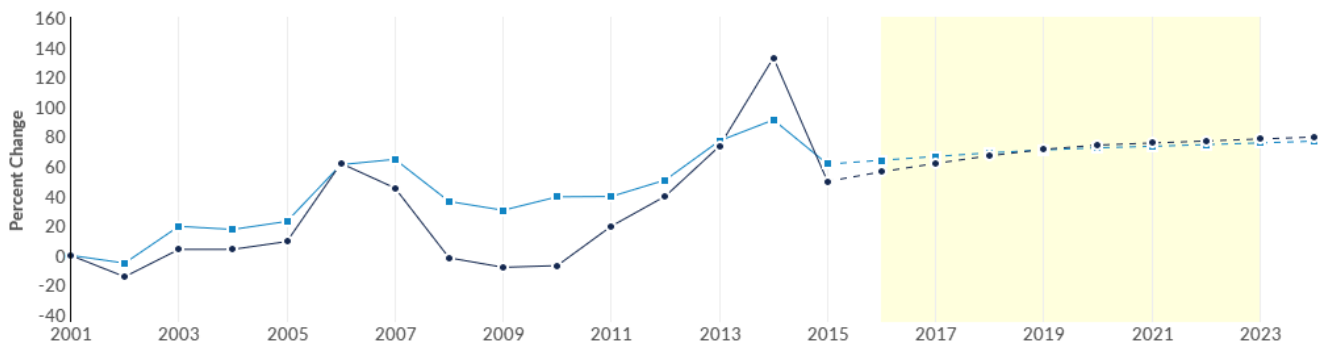
- Analytical or Scientific Software: Blue Tractor Software DNADynamo, Gene Codes Sequencer, VayTek VoxBlast, Visual Molecular Dynamics VMD
- Data Base User Interface and Query Software: Microsoft Access, Structured query language SQL
- Operating System Software: Linux, UNIX

#### Skills & Abilities Required<sup>6</sup>:

- Critical Thinking: using logic and reasoning to identify the strengths and weakness of alternative solutions
- Deductive Reasoning: applying general rules to identify the specific problems
- Complex Problem Solving: identifying complex problems and reviewing related information to evaluate and implement solutions

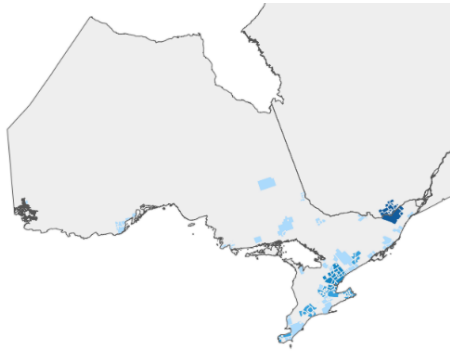
<b>6,463</b> <b>Jobs<sup>7</sup> (2015)</b> 7% below Canada's average	<b>14.1%</b> <b>% Change (2016-2023)</b> Canada: 7.1%	<b>\$35.90/hr</b> <b>Median Hourly Wages<sup>8</sup></b> Canada: \$34.68/hr
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### Ontario Trends



	Region	2016 Jobs <sup>7</sup>	2023 Jobs <sup>7</sup>	Change	% Change
•	Ontario	6,742	7,694	952	14.1%
•	Canada	18,414	19,722	1,308	7.1%

## Where are the most jobs in Biologists and Related Scientists?



Census Metropolitan Aggregate	2023 Jobs <sup>7</sup>
Ottawa - Gatineau	2,712
Toronto	2,165
Hamilton	467
Kitchener - Cambridge - Waterloo	305
London	299

## Who are employing Biologists and Related Scientists?

Industry	Occupation Jobs <sup>7</sup> in Industry (2015)	% of Occupation in Industry (2015)	% of Total Jobs <sup>7</sup> in Industry (2015)
Other federal services	1,597	24.7%	1.3%
Scientific research and development services	711	11.0%	2.4%
General medical and surgical hospitals	603	9.3%	0.3%
Provincial and territorial public administration	478	7.4%	0.6%
Architectural, engineering and related services	417	6.4%	0.7%

## Reference and Notes

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<sup>1</sup><https://brocku.ca/webcal/2016/undergrad/biol.html>

<sup>2</sup> <https://brocku.ca/webcal/2016/undergrad/biom.html>

<sup>3</sup> <https://brocku.ca/webcal/2016/undergrad/medi.html>

<sup>4</sup> Location Quotient: a calculation that quantifies the concentration of a particular industry, cluster, or occupation, in a region as compared to the nation. It can reveal what makes a particular region “unique” in comparison to the national average. Source: <http://www.economicmodeling.com/2011/10/14/understanding-location-quotient-2/>

<sup>5</sup> <https://brocku.EmsiCareerCoach.ca>

<sup>6</sup> <https://www.onetonline.org/>

<sup>7</sup> Employment numbers do not include people who are self-employed and may be under-represented.

<sup>8</sup> Wages do not consider people who are self-employed and may be under-represented.