



Economic Information Observatory
a regional cooperation project between
Atlantic Canada and **Saint-Pierre and Miquelon, France**

Education and Training for the Future



Atlantic Canada (p. 1-5)

Saint-Pierre and Miquelon, France (p. 6-9)



Education in Atlantic Canada

In this issue:

Education Sector: Key Figures	2
Education Sector: Structure and System	3
Training and Professions of the Future	4-5

One of the best in the world, Canada's education system is ranked seventh among OECD nations according to the Programme for International Student Assessment (PISA). With a **share of the GDP allocated to education** of 6.0% (exceeding the OECD average of 5.2%), Canada continues to offer a **model education system** that attracts a growing number of international students, making it one of the top 5 destinations for foreign university students. The number of foreign students in Canada doubled between 2001 and 2012, currently standing at 350,000 and generating more than \$8 billion in revenue annually. The Constitution of Canada awards jurisdiction over education exclusively to the provincial and territorial governments, which are responsible for establishing their own policies with regard to education as well as advanced study and research at all levels of education. **Atlantic Canada** in particular stands out for the quality of its education system and boasts an average level of education exceeding the national average. For additional information, see *Intell-Echo*, vol. 2, no. 8, 2015, and "Education, Research and

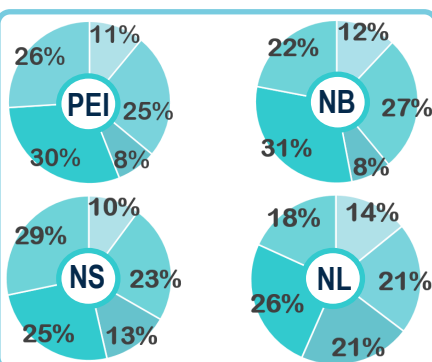
Universities in Atlantic Canada and regional spin-off benefits

- ▶ 16 universities
(located in 18 communities
across Atlantic Canada)

- ▶ 74,000 full-time students
- ▶ 14,600 part-time students

- ▶ 16,261 faculty and staff members
- ▶ Create 3 to 7% of jobs in provincial capitals
and up to 35% of jobs in smaller university
towns
- ▶ 38,371 jobs in total

- ▶ Total payroll exceeding \$1.1 billion
- ▶ \$2.6 billion in GDP
- ▶ \$496 million in federal and provincial taxes
- ▶ \$615 million in R&D or 57% of total R&D in
the region
- ▶ Economic impact of international students
estimated at \$565 million
- ▶ \$110 million in construction

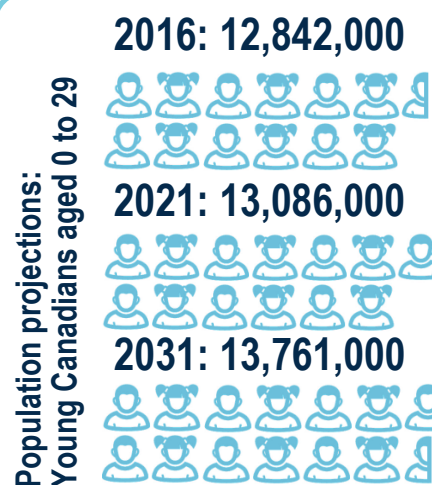
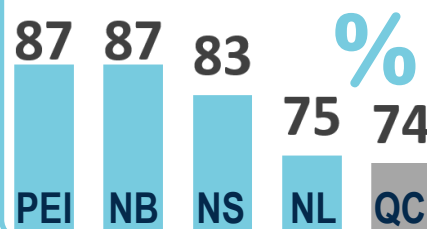


Educational attainment in the population aged 25 to 64

- Less than high school
- High school
- Trades
- College
- University

Level of education

More than 85% of Canadians aged 25 to 64 have at least a high school diploma, exceeding the 78% average among OECD countries



Promising fields of study

Robotics, geomatics, remote piloting,
e-commerce and cybersecurity

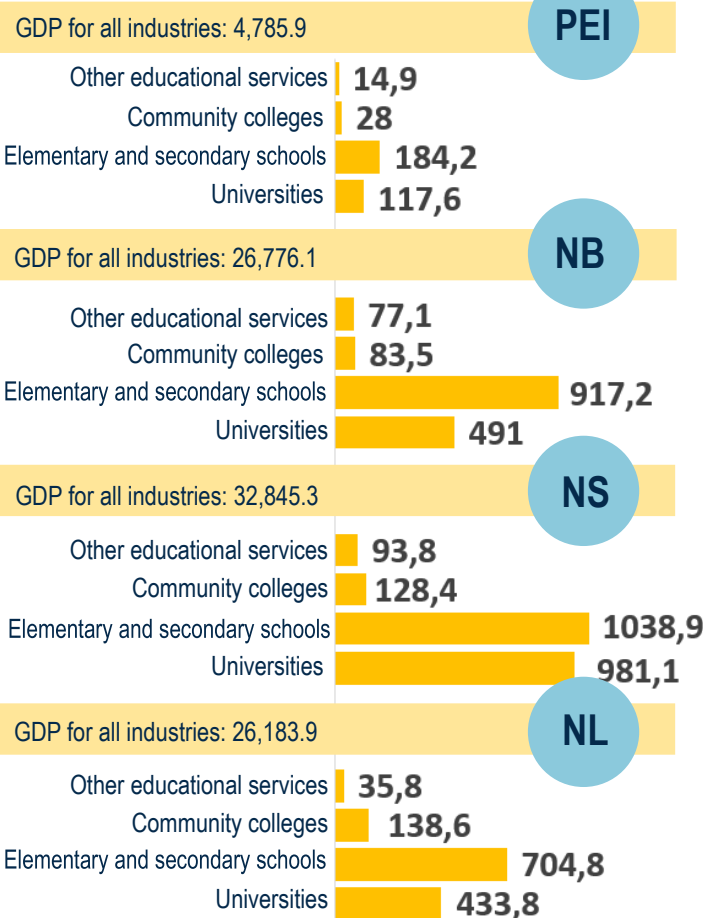
- ▶ Data scientist
- ▶ Big data architect
- ▶ Social media strategist
- ▶ Cloud services specialist
- ▶ Digital marketing specialist
- ▶ Interactive media developer
- ▶ UI/UX designer
- ▶ Drone pilot

Sources and useful links: Association canadienne d'éducation de langue française, <<http://www.acelf.ca/>>; University Affairs, <<http://www.universityaffairs.ca/magazine/>>; École branchée, <<https://ecolebranchee.com/>>; EducaRev, <<https://educarev.jimdo.com/>>; Canadian Network for Innovation in Education, <<https://cnie-rcie.ca/>>; Canadian Journal of Learning and Technology, <<https://www.cjlt.ca/index.php/cjlt/>>; International Journal of E-Learning and Distance Education, <<http://www.ijede.ca/index.php/ijede/index>>; Society for Teaching and Learning in Higher Education, <<https://www.stlhe.ca/>>; Statistics Canada, <<https://www.statcan.gc.ca/>>.

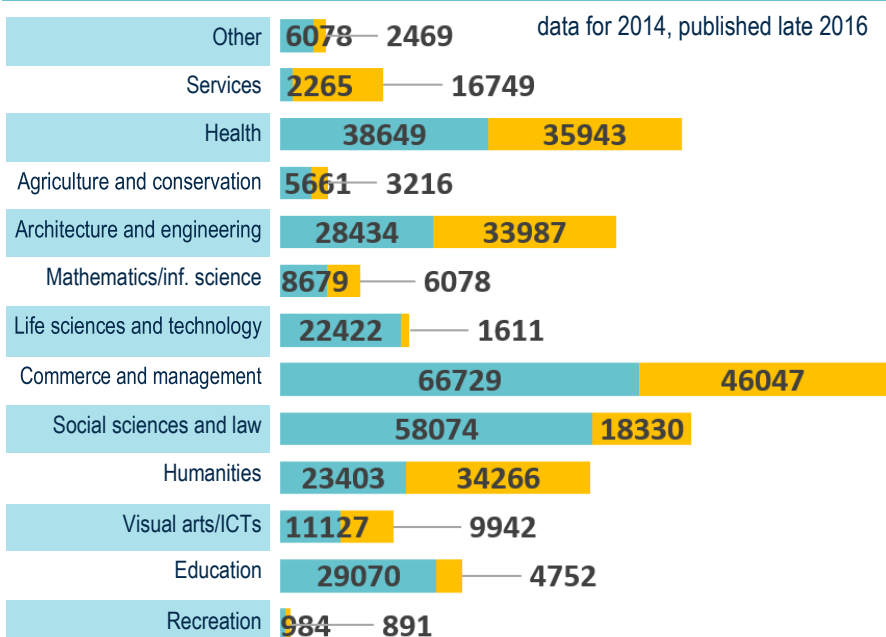
Education Sector: Key Figures

GDP at basic prices for the education sector

(data for 2016, in \$ millions)



Postsecondary graduates by program type in Canada



Recent and upcoming events in Canada

Society for Teaching & Learning in Higher Education
June 20 – 23, 2017, Halifax, NS

- 2017 conference theme: "Gateways in Higher Education: Cultures, Transitions and Transformations"

Professional and Organizational Development Network in Higher Education (POD)
October 25 – 29, 2017, Montréal, QC

- 42nd annual conference on the impact of developments in the education and training sector

Semaine de formation technopédagogique en AtlanTIC

October 30 – November 4, 2017, Moncton, NB

- Taking place this week is the 16th annual conference of the Association pour l'avancement pédagogique des technologies de l'information et de la communication en Atlantique and the APTICA and CompÉTICa research symposium

Skills and Post-Secondary Education Summit
November 29 – 30, 2017, Toronto, ON

- Fifth annual event organized by the Centre for Skills and Post-Secondary Education of the Conference Board of Canada

Clair2018 – Voir l'éducation autrement!
January 25 – 27, 2018, Clair, NB

- For details on the offerings in 2017, visit www.clair2018.wikispaces.com/Accueil (in French only)

Centre for Academic Excellence at Laurentian University

May 15 – 17, 2018, Sudbury, ON

- Broad range of activities on the topic of innovation in education for professionals

Annual Conference of Society for Teaching & Learning in Higher Education

June 19 – 22, 2018, Sherbrooke, QC

- Theme: "Pedagogical Innovation: Adapting Practice to Evolving Cultures"

Annual Conference of Association canadienne d'éducation de langue française

September 27 – 29, 2018, Moncton, NB

- Forum for sharing ideas and information on issues in French-language education

Education Sector in Atlantic Canada: Structure and System

Structure of Education System

Provincial governments	Administrative structures	Recognition of credentials and industry promotion	Professional teachers' associations in Atlantic Canada
PEI Department of Workforce and Advanced Learning Department of Education, Early Learning and Culture PEI-Québec Student Exchange Program	Council of Ministers of Education (Canada) (CMEC) Council of Atlantic Ministers of Education and Training (CAMET) Atlantic Apprenticeship Council	Members of Alliance of Credential Evaluation Services of Canada Canadian Information Centre for International Credentials Canadian Network for Innovation in Education	Canadian Teachers' Federation (CTF) <i>Regional bodies</i> Prince Edward Island Teachers' Federation
NB Department of Post-Secondary Education, Training and Labour Department of Education and Early Childhood Development	Maritime Provinces Higher Education Commission (MPHEC) Atlantic Provinces Community College Consortium (APCCC)	EduCanada Universities Canada	New Brunswick Teachers' Federation (NBTF) Association des enseignantes et des enseignants francophones du Nouveau-Brunswick (AEFNB)
NS Department of Labour and Advanced Education Department of Education and Early Childhood Development	Association of Atlantic Universities (AAU) In May 2017, Canada and France signed an agreement on the mutual recognition of credits with a view to increasing the number of French second language teachers in Canada among other goals. Under this agreement, more Canadian students will also be able to pursue advanced studies in France. At the same time, Canada is proposing to adopt a national accreditation system for general practitioners under an initiative being led by Dalhousie University in Nova Scotia.		New Brunswick Teachers' Association (NBTA) Nova Scotia Teachers Union
NL Department of Advanced Education, Skills and Labour Department of Education and Early Childhood Development			Association des enseignants acadiens Newfoundland and Labrador Teachers' Association

Education System in Canada

Minimum age	5	6	7	8	9	10	11	12	13	14	15	16	17
Canada	Kind.	Gr. 1	2	3	4	5	6	7	8	9	10	11	12
school	PEI	Elementary school						Intermediate school			High school		
	NB (fr)	École primaire									École secondaire		
	NB (en)	Elementary school						Middle school			High school		
	NS	Elementary school						Junior high school			Senior high school		
	NL	Primary school				Elementary school		Intermediate school			Senior high school (I - III)		

Canada Post-secondary education system in Canada and higher education system in France

		year 1	2	3	4	5	6	7	8	9	10	
post-secondary	Technical/technological education											
	Technical/vocational training	(1 – 4 years)										
	College diploma	(1 – 3 years)										
	General education											
	University degree	Bachelor's degree (4 – 5 years)					Master's degree (1 – 3 years)			Doctorate (3+ years)		

Europe

France	CP	CE1	CE2	CM1	CM2	6 ^e	5 ^e	4 ^e	3 ^e	2 ^e	1 ^{re}	Termi-nale
school	Cycle 2				Cycle 3			1 ^{er} cycle			Second cycle	
	Primaire							Collège			Lycée	
Belgium	1 ^{re}	2 ^e	3 ^e	4 ^e	5 ^e	6 ^e	1 ^{re}	2 ^e	3 ^e	4 ^e	5 ^e	6 ^e
	Primaire						Degré I			Degré II		Degré III
							Cycle inférieur			Cycle supérieur		

Training and Professions of the Future

Jonathan, PEI

Urban farmer



Urban farmers help to meet growing needs among urban populations seeking to embrace organic food options by getting closer to food sources through local farming with an emphasis on local food production with a smaller environmental footprint. In addition to providing city dwellers easier access to fresh fruit and vegetables, urban farmers promote environmental protection in urban areas through their activities: urban farming leads to reduced development of urban heat islands, more efficient rainwater absorption and recycling of organic matter through composting in addition to supporting biodiversity.

Educational path Examples

Occupational training Environmental Applied Science Technology program at Holland College

A 2-year program combining theory and practice to assist students in developing skills in environmental microbiology, soil science, air quality, and water analysis and treatment. Credential: Environmental Technician.

Academic training Bachelor of Environmental Studies degree program at the University of Prince Edward Island

Students choosing the **Environmental Innovation and Change Management** specialization become specialists on living within the limits of our environment and innovations to manage the interaction of human activities with and upon the environment, with an interdisciplinary focus combining the scientific, technical, human and social perspectives.

Professional networks

ACORN (Atlantic Canadian Organic Regional Network); FoodWork.ca; Urban Farmer; Food Secure Canada; City Farmer News; Small Farm Canada

Vanessa, NB

Online Community Manager



With more than 2.95 billion active Internet users worldwide and more than 2.03 billion people making use of the various social media, it has become essential for businesses to cultivate an online presence. Online community managers are, first and foremost, digital marketing specialists that assist companies in implementing an e-communication strategy, building traffic to business transaction websites and fostering client relationships through use of social media.

Examples Educational path

Business administration and community and cultural management program at CCNB-Bathurst Occupational training

An 80-week program offering students the opportunity to acquire a range of skills in relation to the management and coordination of community, cultural and recreational events through an introduction to project management, financial management, marketing and advertising strategy, business law and governance of various types of organizations as well as organizational leadership and communications.

Bachelor of information management (BIM) program at the Université de Moncton, Shippagan Campus Academic training

The BIM program is the only one of its kind at the undergraduate level across Canada. Through this 4-year program, students acquire skills both in the classroom and in the co-operative work-study setting while learning the fundamentals of general management, information content management and information and communication technology management. Topics covered include document management, digital documentation, information collection, strategic watch, multimedia tool management, information system security, e-commerce and business telecommunications.

Professional networks

Association pour l'avancement des sciences et des techniques de la documentation (ASTED); Canadian Marketing Association; Canadian Internet Marketing Association; Atlantic Chamber of Commerce; Retail Council of Canada

Training and Professions of the Future (cont.)

Michelle, NS

Business start-up specialist

As Atlantic Canada becomes increasingly fertile ground for innovative start-ups and as entrepreneurial culture continues to expand gradually from urban to rural areas, a growing need for business start-up support is leading to demand for new skills. Business start-up specialists have the expertise required to guide future business owners in areas ranging from legal aspects, such as choosing the most suitable legal structure, to financial and management-related considerations, including developing a business plan and navigating the various start-up support and funding programs, with the ultimate goal of setting young companies up for long-term success.

Educational path Examples

Occupational training Nonprofit Leadership program at Nova Scotia Community College

Through this one-year part-time program offered online and leading to an advanced diploma, students acquire theoretical knowledge and practical skills in strategic leadership, marketing, human resources management, partnerships and fund-raising. They also develop the skills required for establishing sound corporate governance processes, understanding policy development, incorporating best practices through benchmarking and basic financial accounting.

Academic training Bachelor of Management program at Dalhousie University in Nova Scotia

This undergraduate university program in general management offers students the opportunity to complete specialized coursework in entrepreneurship and innovation management with emphasis on management of venture-capital firms, joint venturing and lean management processes.

Professional networks

Startup Canada; Canadian Acceleration and Business Incubation; National Crowdfunding Association of Canada; Canadian Venture Capital & Private Equity Association; Blockchain Association of Canada; National Angel Capital Association of Canada

Robert, NL

Geriatric kinesiologist

By 2031, nearly one in four Canadians will be age 65 or older, resulting in a sharp increase in nationwide demand for geriatric kinesiologists. These experts in body movement are equipped to guide clients in this age group in managing the effects of aging on their range of movement, physical strength, flexibility and overall well-being so that they can maintain their health and independence well into their advanced years. Geriatric kinesiologists can design specialized programs for persons with reduced mobility or balance disorders as well as assist clients in increasing their functional capacity or develop customized exercise programs to help relieve chronic pain.



Examples Educational path

Rehabilitation Assistant program at the College of the North Atlantic, NL Occupational training

A 2-year program combining theory and practice in the provision of therapeutic services and care in hospitals, rehabilitation centres or long-term care facilities to clients coping with limitations in occupational performance and/or functional movement, with opportunities to apply new knowledge and skills in the clinical setting.

Bachelor's and Master's programs in Kinesiology and Human Kinetics, Memorial University, NL Academic training

Graduate program in kinesiology offered since 2005 and undergraduate program available via distance learning since 2008 with concentrations in physiology, biomechanics, ergonomics, sports psychology, social and cultural impact of physical activity and health.

Canadian Kinesiology Alliance, Canadian Physiotherapy Association Professional networks



In this issue:

France's
attractiveness

5

Graduate schools

6

Apprenticeship
agreements

7

Francoforum

8

France's attractiveness



Excellent and affordable higher education, good quality of life, must-see tourist attractions, a world-class health service... France is one of the most popular destinations for international students.

- ♦ **Top** non-English-speaking country for overseas students
- ♦ Paris **second** in the *QS Best Student Cities Rankings* behind Montreal
- ♦ **Cost of studying** in France: The State covers most of the tuition fees charged by public providers (average €14,000 per student per annum). No distinction is made between international and French students.
- ♦ **1,300** courses taught in English
- ♦ The world's **most popular** tourist destination
- ♦ The world's **fifth** largest economy
- ♦ **World-leading companies** such as Airbus (aerospace), Total (energy), Orange (telecommunications), Sanofi (health), LVMH (luxury goods), L'Oréal (cosmetics) and Danone (food products)
- ♦ An environment favourable to **innovation** and **young entrepreneurs** (see last September's *Intell-Echo* on startups)
- ♦ In France, over half of research is conducted within universities. The National Centre for Scientific Research (CNRS) is the world's leading research facility (Nature Index, 2015).

List of countries hosting international students

Rank	Country	Student numbers
1	United-States	842 384
2	United Kingdom	428 724
3	Australia	266 048
4	France	235 123
7	Canada	n.a.

Source: UNESCO, 2014

Annual university tuition fees (2017-2018):

- €184 for undergraduates
- €256 for postgraduates
- €391 for PhD students
- €610 in engineering schools

Tuition fees at private providers, particularly business schools, are typically €3,000 to €10,000 per annum.

Graduate schools



France's prestigious *grandes écoles* are public or private graduate schools that recruit their students by competitive entrance examination and provide advanced education. They include engineering and management schools, as well as *écoles normales supérieures* (ENS), *instituts d'études politiques* (IEP), veterinary schools and others with various specializations.

In total, the highly selective *grandes écoles* host some 30,000 overseas students, who are then highly sought after on the international job market..

Places at *grandes écoles* are awarded on the basis of competitive entrance examination*. These exams are open to students who have completed two years of preparatory courses or two to three years of higher education via graduate admissions. However, some engineering *grandes écoles* recruit from high school for a five-year study programme.

France continues to attract more overseas students every year (309,642 at the start of the 2015–2016 academic year). Whilst universities receive the vast majority of students (225,000 vs. 84,000 in *grandes écoles*), *grandes écoles* have seen the greatest increases in the last five years (+26.6% vs. +3.2%).

The education provided by *grandes écoles* includes ample opportunities for overseas placements, including **internships**, **exchange years** in a partner university, **humanitarian projects** and even **courses leading to joint international qualifications**.

*for more information: <http://www.onisep.fr/Choisir-mes-etudes/Apres-le-bac/Organisation-des-etudes-superieures/Les-classes-preparatoires-aux-grandes-ecoles-CPGE>

As the top non-English-speaking country for overseas students, France has a wide range of **courses taught in English**. There is no requirement to speak French to study in France, which provides an opportunity to gain qualifications whilst learning the language, facilitating an international career in 75 francophone countries.

The **Campus France catalogue** of higher education taught in English presents some 1,200 courses. For more information : <http://www.campusfrance.org/en/page/programs-taught-English>

Campus France is responsible for promoting higher education and managing the international mobility of students, researchers, experts and guests. The network of **255 Campus France facilities in 121 countries** is a strong argument to convince potential overseas students to choose France. It is just one of the local tools available to promote French higher education, facilitate the launch of exchange programmes, inform and advise students, and provide useful information before placements.

For more information : <http://www.campusfrance.org/fr>

Apprenticeship agreements



The apprenticeship agreement is a **contract of employment** between an employer and employee. It aims to bring young people general, theoretical and practical training **with a view to obtaining a State-recognized qualification** (CAP, BAC, BTS, bachelor's degree, master's degree, etc.) or vocational qualification listed in the national directory (RNCP).



An apprenticeship is a **work/study programme**: it combines training at an employer and education provided in an apprentice training centre (CFA). The CFAs provide general education combined with technological and practical training to supplement the training received in the company. The apprentice is mentored throughout by an apprenticeship manager who is a company employee or the employer itself.

Apprenticeship agreements are open to young people aged 16 to 25. Future apprentices are required to find a company likely to hire them. The agreements last as long as the training programme. They can vary from one to three years, depending on the qualification.

On 31 December 2016, there were 412,437 apprentices in public and private training centres in France, including 152,489 in higher education (from vocational training certificates to engineering degrees).

It is possible to gain vocational qualifications in two ways: in vocational *lycées* with student status or in an apprentice training centre with apprentice status. Whether they are obtained with student or apprentice status, the qualifications are the same.

	In vocational <i>lycées</i>	In an apprentice training centre
Status	Student	Apprentice
School vacations	Yes	No, but paid leave
Salary	No	Yes, a percentage of the minimum age
Time spent in the company	12- to 22-week internship over two or three years	At least one week in two in the company

For more information:

<http://travail-emploi.gouv.fr/formation-professionnelle/se-former-en-alternance/l-apprentissage-160/>
<https://www.alternance.emploi.gouv.fr/>

Apprenticeships in St Pierre and Miquelon

Following a partnership between **Lycée Professionnel Emile Letournel**, which is responsible for the teaching, **CACIMA**, which finalizes the agreements, and the **local council**, which provides the funding, young people have the opportunity to gain qualifications (CAP, BEP and BAC PRO) via training that supplements standard vocational courses. Recipients enter into a work/study contract with a company and enjoy apprentice status.

- 19 areas of training provided
- 82 contracts signed since 2000
- 49 employers involved
- 80% of apprentices find work

For more information:
contact@cacima.fr

Francoforum



The Francoforum in St Pierre is a specialized **French-language teaching facility** launched in 1992. It provides various intensive programmes tailored to demand and the recipients (schoolchildren, students, teachers, adults in continuing education and individuals).

• For schoolchildren

Every year, between 700 and 1,000 of Newfoundland's schoolchildren (aged 12 to 18) visit St Pierre as part of cultural and language programmes lasting three days on average. The schoolchildren further their French language skills through the various fun activities on offer.

• Summer camps

Summer camps are a very popular option for young Canadians during school vacations. Every summer, the Francoforum runs one or two intensive seven- to ten-day programmes aimed at young people from the Canadian provinces. The available activities are culture and language based and students usually stay with host families.

• For university students: The Frecker Programme

The Frecker programmes are aimed at students of the Memorial University of Newfoundland in St John's. There is a four-week summer programme in July and a thirteen-week autumn programme from September to December. Students at the Francoforum follow classes validated by their university and experience a complete language immersion (life with a host family, obligation to speak French between them, etc.). They are encouraged to have as much contact with the people of St Pierre and Miquelon as possible. Each student's level of French is assessed on arrival and when leaving St Pierre.

The Francoforum is now aiming to propose similar programmes to other universities in the **Atlantic Provinces**.

For more information:

http://www.mun.ca/languages/more/study_abroad/french/frecker_fall.php

http://www.mun.ca/languages/more/study_abroad/french/frecker_summer.php

• For teachers

In summer, a course lasting five to ten days is aimed at teachers of all levels who want to improve their proficiency in French as a second language. In partnership with the Canadian Teachers' Federation (CTF), from summer 2018 the Francoforum will propose a "Teaching in French-language schools" training workshop, which is open to Canadian teachers from French-language schools in a minority context.

FRANCOFORUM

For more information :

<http://www.lefrancoforum.com>

Email : lefrancoforum@gmail.com

INTELL-ECHO



Are you seeking business opportunities in this sector?
CACIMA and FCCC-AN can facilitate your business prospection process and help with establishing new partnerships
(targeted information and network contacts)

Intell-Écho is a periodic bulletin published by the Economic Information Observatory, a regional cooperation project between Atlantic Canada and Saint-Pierre and Miquelon. The publication of this bulletin is made possible through the sponsorship of the Atlantic Canada Opportunities Agency in support of research initiatives, linguistic minorities and business development, and the Province of New Brunswick as well as the Université de Moncton, Shippagan Campus, and the Prefecture and Territorial Council of Saint-Pierre and Miquelon.

Editorial Production: Project Lead, Dr. Monica Mallowan, PROVIS Observatory, Université de Moncton, Shippagan Campus, Shippagan, NB, Canada.
observatoirePROVIS@umoncton.ca
© PROVIS Observatory 2017.

Information Policy: The aim of this project is to provide useful information to stakeholders seeking to promote regional cooperation between Atlantic Canada and Saint-Pierre and Miquelon. Information supplied herein may be used on the condition that the Intell-Écho be cited as a source.

Responsibility: The project team is not responsible for the information resources supplied in this bulletin (content, links, changes, updates, timeliness of statistical data) nor for decisions or actions undertaken based on information supplied herein.



Chambre d'Agriculture,
de Commerce, d'Industrie,
de Métiers et de l'Artisanat
(CACIMA)
4, boul. Constant Colmay,
BP 4207 97500
Saint-Pierre et Miquelon, France
www.cacima.fr/blog



PROVIS—UNIV. DE MONCTON,
CAMPUS DE SHIPPAGAN
218, J.-D.-Gauthier
Shippagan NB E8S 1P6
Canada
<http://provis.umcs.ca>



Chambre de Commerce et
d'Industrie Française au Canada—
Réseau atlantique—Atlantic Network
(CCFCRA)
333, av. Acadie,
Dieppe, NB, E1A 1G9
Canada
www.ccfra.ca

The Economic Information Observatory is a regional cooperation project established between Atlantic Canada and Saint-Pierre and Miquelon. The publication of this information bulletin is made possible through the sponsorship of the Préfecture and the Conseil Territorial of Saint-Pierre et Miquelon, in support of the Atlantic Canada Opportunities Agency's programs for research initiatives, linguistic minorities and business development, and the Province of New Brunswick, as well as the University de Moncton, Shippagan Campus and the Prefecture and Territorial Council of Saint-Pierre and Miquelon.

Editorial Production: Project manager, Mrs. Janick CORMIER, chambre d'Agriculture, de Commerce, d'Industrie, de Métiers et de l'Artisanat.
Intell-echo@cacima.fr

© Observatoire CACIMA 2017.

Information Policy: The aim of this project is to provide useful information to stakeholders seeking to promote regional cooperation between Atlantic Canada and Saint-Pierre and Miquelon. Information supplied herein may be used on the condition that the Intell-Écho bulletin be cited as a source.

Responsibility: The project team is not responsible for the information resources supplied in this bulletin (content, links, changes, updates, timeliness of statistical data) nor for decisions or actions undertaken based on information supplied herein.