

Top five reasons to choose ICT

1. Reach your potential in a field that applies to all aspects of everyday life, from the car you drive to the movies you watch and the way governments and businesses interact with people.
2. Opt for an accessible sector that provides good working conditions: competitive salaries, the opportunity to telecommute, flexitime and workdays that allow for a better work-life balance.
3. Make a positive difference in the world by choosing a profession that drives today's important issues, including education, natural resource management, health care and communications.
4. Showcase your creativity and leadership skills in a versatile career that suits different types of profiles.
5. Take on exciting challenges focused on innovation and problem solving in a cutting edge industry that is in constant evolution.

Myths

Anonymity
Isolation
Monotony
Routine
Sidelines
Repetition

Reality

Evolution
Creativity
Recognition
Opportunity
Flexibility
Openness

Help them

CHANGE THE WORLD

with a career in information and
communications technologies

- Overview of the sector
- Specific profiles
- Employment conditions
- Training options
- Myths vs. reality



PROGRAMMING THE FUTURE... TODAY

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Technology is everywhere

Technology reaches far beyond computer science

Although the Internet and cellular telephony are key fields, information and communications technologies have a much broader scope and are an integral part of the economy and the entertainment industry. Technology applies to everything:

- Developing bionic devices to assist amputees in their movements;
- Using smartphones to manage a paper manufacturer's hazardous products;
- Coordinating prescriptions between doctors and pharmacists;
- Ensuring small business pay management;
- Creating video games;
- Helping schools administer the grades attributed to students and make report cards available online;
- Coordinating social networks, etc.

Changing the world

Tech studies can lead to a career in...

- Software and multimedia
- Telecommunications and networks
- Microelectronics and informatics

But also in...

- Health care
- Environment
- Sports
- Finance
- Education
- Development support

And many other fields.

The career opportunities in the sector reflect the very essence of the technologies themselves: they are as diverse as human imagination and creativity.

HOT TECH FIELDS

- Computer security and digital piracy
- Information retrieval systems
- Smart phones
- Medical record digitization
- E-learning
- Telesurgery
- Web search engine enhancement
- Hyper-realistic video games
- The booming 3D film industry

Yours for the taking!

In 2010, there were **184,400 men and women** working in Quebec's ICT sector:

- 45% worked in one of Quebec's **7,783 tech companies** that specialize, for example, in software or telecommunications development, and generate 5.5% of the province's GDP.
- 55% worked in other technology-driven economic sectors, including architectural design, insurance, advertising and transportation.

Full employment: In 2009, the average unemployment rate for tech graduates was 4.4% for college students and 4.3% for university students.

In 2010-2014, some **7,500 positions/year** will be available in 20 technology-related fields.

A career in technology means:

- Working in one of the newest and most innovative sectors
- Being creative in a field that is in constant evolution
- Benefitting from career advancement opportunities that are often much more flexible than in other sectors
- Finding the right work-life balance thanks to options like flex time and telecommuting
- Having the opportunity to earn an attractive salary

MEDIAN SALARIES*

- Computer systems architect: \$89,800
- Database administrator: \$69,400
- Intermediate programmer-analyst: \$57,600
- Web designer: \$50,000
- Web integrator: \$45,300

* The median salary is the amount that divides salary distribution in a given profession into two equal groups. Half of the salaries are above the median and half are below. The median salary is different from the average salary, which divides the total amount of the salaries distributed to all members of a given profession by the total number of members.

Still...

ICT registration and graduation rates remain very low as compared to job market demand.

- In 2003-2007, college registrations plummeted. Most notably, the number of applications to computer science DCS programs fell by 55% between 1999 and 2006.
- In 2003-2009, the number of college graduates was in constant decline. The most significant drop was in computer science technology programs.
- In 2003-2007, ICT university registrations at the undergraduate level plunged by 7.6% annually.

This situation is attributable to several factors, including the prevalence of certain misconceptions about the sector.

Myth vs. reality

Technology is for guys!

Women make up less than 30% of ICT workers. Believing that a career in technology is too abstract, women tend to gravitate towards sectors such as healthcare, which is perceived as more useful.

Why not show girls that ICT are a great way to showcase their creativity, meticulousness and team-building skills? It's a sector that serves society and offers flexible and advantageous work conditions.



SOMETHING FOR EVERYONE

The new techs

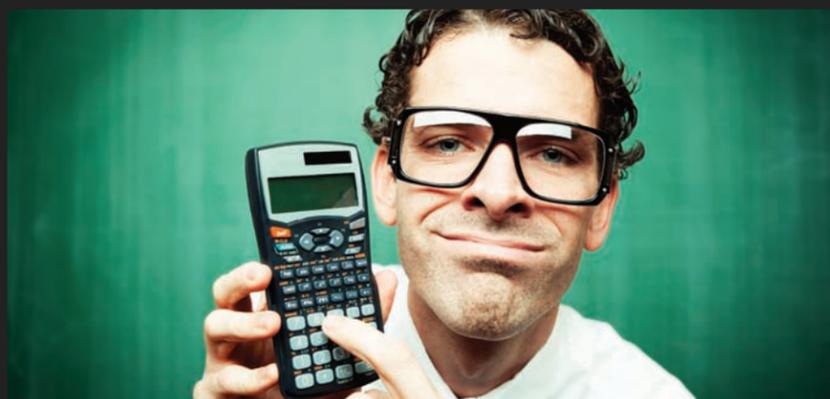
Long perceived as solely focused on technical competencies, ICT careers have **evolved** significantly.

Employers are looking for bright collaborators who are open to the world, possess good communication skills and understand the specific needs of their business.

Myth vs. reality

Tech careers are for geeks!

In the 90s, ICT professionals were perceived as hyper-specialized, slightly antisocial computer geeks. But that's so cliché!



Why not remind your students that the tech sector is one of the most creative and dynamic options out there? In fact, employers are always on the lookout for people with different profiles and skills.

For instance...

A **computer consultant** is also a **decision-maker**.



Decision-makers use their **natural leadership skills**, organizational abilities and determination to bring projects to fruition. They are persuasive, bold, resourceful, ambitious and risk-taking leaders.

A **computer security specialist** is also an **innovator**.



Innovators combine their technical skills and **creativity** to develop new state-of-the-art products, equipment and software. They are creative, inspired, forward-thinking, imaginative, resourceful, ingenious and curious.

A **systems manager** must also be a **developer**.



Developers use their rational, logical side to develop and program products, equipment and software. They like to **build**, improve and modify components to meet demands and needs. They are well organized, efficient, conscientious, meticulous, disciplined and perseverant.

A **computer technician** is also a **problem solver**.



Problem solvers like to find solutions to the various technological obstacles they encounter. They are analytical types who find efficient **solutions** to big and small challenges. They are curious, critical, rigorous, observant, insightful and patient.

Play the detective and question your young ones, discover their type of personality, or have them discover it by themselves, thanks to our online quiz available on www.macarriere techno.com

Work skills, life skills

A few questions will help reveal a student's propensity for an ICT career:

What types of sports does he play? Does she prefer soccer or swimming? Is he more of a leader or a mediator? Is she overly sensitive?

A tech career requires good **team-building skills**:

- Sharing ideas
- Comparing options
- Being open to criticism

Is she able to express herself clearly? Can he simplify complex notions? Does she use too many shortcuts, or does she tend to go on and on?

A tech career requires good **communication skills**:

- Explaining aspects of the work to colleagues and supervisors
- Translating notions into simple terms for clients
- Sharing ideas with collaborators

Is he interested in a particular extracurricular activity? Does she subscribe to specialized magazines? Does he enjoy research?

A tech career requires the drive for continuous **improvement**:

- Going beyond the knowledge acquired in school
- Wanting to always learn more
- Keeping up-to-date on new techs

Do challenges stimulate her? How does he react to pop quizzes?

A tech career requires the ability to **switch gears on a dime**:

- Meeting tight deadlines
- Satisfying client and company needs

Is he a blogger? Does she have tech pet projects? Does he enjoy online gaming, animation, social networks?

A tech career requires **passion** and **curiosity**:

- Mastering a technology
- Seeking innovation

Myth vs. reality

A career in technology means spending the whole day alone in front of a computer!

Now there's a stereotype that sticks to computer specialists, even though spending the day in front of a monitor is the lot of most people today, from travel agents to journalists!

Why not explain to your students that **communication, collaboration and teamwork** are at the core of all ICT careers?



Help them find their way

TRAINING

Many roads can lead to a tech career. From short programs to longer training, every student can use his or her strengths and interests to **change the world**. Here are just some of the programs available:

Vocational diploma (DVS)

- Telecommunication equipment installation and repair
- Computer support
- Automated systems electromechanics

College diploma (DCS)

- Multimedia integration technology
- Computers and networks
- Computer science technology

Bachelor's degree

- Electrical engineering
- Business systems analysis
- Computer security

MORE INFORMATION

An interactive Web site was created to help students put a face and a name on different tech careers:

www.macarrieretechno.com

- Watch video interviews with tech professionals
- Take virtual tours of companies
- Use the search engine to find tailored training options
- Find an extensive list of professions with detailed descriptions
- Try out tests, tips and a quiz on different professions

There's also a Facebook page to stay on top of the latest news:

www.facebook.com/changelemonde (In French only)

- Find out about tech success stories
- Stay up to date on open houses at CEGEPs and universities and other tech events
- Be the first to watch a video of a hologram that repeats your movements in a bathroom mirror!

And an interactive online game to see if you have what it takes to become a pro:

The Red Carpet

A multimedia company calls upon a young player to save its movie premiere from a critical situation. Discover six jobs and put your skills to the test. Go to www.macarrieretechno.com.

The information presented in this pamphlet is based on the following sources:

- TECHNOCompétences (2012). *Enquête de rémunération*
- STATISTICS CANADA (2010). *Labour Force Survey*
- Jobboom magazine (2011). *Secteurs en vedette – TIC*
- Emploi-Québec (2011). *IMT en ligne*

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