



**WFCP**

World Federation of  
Colleges and Polytechnics



# WORLD BEST PRACTICES GUIDE IN PROFESSIONAL AND TECHNICAL EDUCATION



# WFCP

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## ABOUT THE WFCP

The World Federation of Colleges and Polytechnics (WFCP) is a member-based international network of colleges, polytechnics, university colleges, institutions and individuals of professional and technical education and training. The Federation provides leadership in delivering workforce education for the global economy.

The WFCP began as an informal network borne out of a desire to have a forum for the almost 4,000 professional and technical education and training institutions around the world to meet regularly, learn from each other, and share experiences. The first meeting was held in 1999 in Quebec City, Canada along with the first World Congress of the WFCP and officially formalized as a network in 2002 with the 2nd World Congress held in Melbourne, Australia.

Today, the Federation represents colleges, institutes, and polytechnics, united by the mandate to prepare students for complex professional roles in a changing society so that they can emerge as leaders and innovators in their chosen careers.

Acting as the united voice for its members, the Federation enables the:

- promotion of its members to their communities;
- influence on the development of policy;
- access to information and experiences that allow each to learn from each other;
- sharing best practices;
- offering of an online community;
- promotion of partnerships to improve staff and student mobility;
- development of partnerships to deliver international contracts;
- organization of the bi-annual World Congress to enable knowledge exchange; and,
- positioning of its members on crucial issues such as inclusiveness, expectations of excellence in professional and technical education and training.

To learn more about the WFCP and how to become a member, please visit [wfc.org](http://wfc.org).

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# INTRODUCTION

The World Federation of Colleges and Polytechnics is pleased to present its first *World Best Practices Guide in Professional and Technical Education*. The Guide pulls together profiles of the recipients of the WFCP's second Awards of Excellence, which recognized the contributions and accomplishments our members make to the world of professional and technical education and training. These projects, institutions, and individuals offer guidance on everything from establishing remote access programs to constructing buildings that embrace green technologies to dedicating an institution to applied research. The Guide demonstrates the growth, innovation, and leadership of Federation members; offers inspiration to other institutions seeking to develop processes; and, serves as a catalyst in generating world-class performance.

The idea for Best Practice Guide came from a desire to achieve one of the Federation's stated goals: sharing of best practices. Who better positioned to determine and share best practices than institutions, individuals and organizations that have been recognized for what those best practices can achieve. Each entry provides a snapshot of the institution, a short look at the projects, what has been accomplished, the value to international leaders in education, words of wisdom to inspire, and next steps for the projects or programs or institutions or themselves. The Guide is organized according to the categories of recognition: Access to Learning and Employment, Applied Research, Entrepreneurship, Green Colleges, Leadership Development, Higher Technical Skills, and Student Support Services. These seven categories are also the World Federation's seven affinity groups. These groups serve as a forum where group members work with their peers from around the world to discuss common challenges and collaborate on projects around the groups' theme.

The entries reveal that challenges institutions of professional education face are common, regardless of where they are in the world. The desire to have a forum to address these common challenges, share experiences, and learn from each other goes back to the core of the Federation's founding; the *World Best Practices Guide in Professional and Technical Education* is another tool to help us achieve that goal. Each entry is accompanied with contact information for the institution to ease collaboration, sharing of best practices, and learning.

We hope you enjoy the *World Best Practices Guide in Professional and Technical Education*, but mostly, we hope it helps you and your institution as you address the challenges of professional and technical education and training.



**ACCESS TO  
LEARNING AND  
EMPLOYMENT**

# ACCESS TO LEARNING AND EMPLOYMENT

## GOLD: HOLLAND COLLEGE

### EARLY CHILDHOOD CARE AND EDUCATION, BLENDED LEARNING DELIVERY MODEL

#### CANADA

#### INTRODUCTION

Holland College, in Prince Edward Island, Canada delivers more than 65 full time career training programs. The college was founded in 1969, and has almost 2,500 full and part time students, as well as adult education, continuing education, and language training students. In the past number of years, Holland College has created an emphasis on developing programs and partnerships that emphasise pathways, to further education and to desired careers. In addition to the long standing apprenticeship training the college is known for, there are increased initiatives towards blended and distance offerings, as well as articulation agreements into related degrees.

The long-established Early Childhood Care and Education Program is one of Holland College's classroom-based diploma programs. In this program, learners generally attend class on a full time basis for two years. The project described below was built in collaboration with full time program.

#### AWARD WINNING PROJECT

The Early Childhood Care and Education Blended Learning Program (ECCE-BL) was created to address a sector/government need in Prince Edward Island. In 2010, due to extensive changes to the educational requirements for early childhood education staff in PEI, a large influx of already employed, undertrained employees required a delivery model that would enable them to work full time, while they studied towards the newly established levels of certification and training.

The program was designed as a cohort-based model, with class sizes capped at 25 (most having between 18-22 learners). The online content was delivered asynchronously; with one Saturday a month together onsite in the classroom. This blend allowed for various types of assessments, as well as interactive, hands-on

curriculum. The shared onsite experiences contributed to stronger relationships, established safety and familiarity among classmates and faculty, and enriched their online dialogue about the day to day practices in their early childhood centres. The onsite interaction also provided a sense of trust in the faculty, who could then provide more robust feedback and ask more thought provoking questions.

The ECCE-BL Program operated from 2010-2016. It was delivered over 3 phases, and each phase was completely funded via provincial government programs. Learners were able to continue to work, receive their salaries, and complete their studies without incurring personal financial expense. In addition to government sponsorship, program partners included the provincial francophone college, the provincial early childhood development association, a provincial essential skills training program, and the licensed early childhood programs across the province. The cooperation between government and agency partners was significant, and ensured all parts of the project were able to operate effectively, with the best outcomes.

External outcomes can also be used to measure the program's effectiveness, considering its service to the local and national aspects of the early childhood sector. In 2007, the Canadian Child Care Human Resource Sector Council prepared a report outlining a training strategy to enhance early childhood services in Canada. Their three goals were to:

1. Enhance the Size and Capacity of the Trained Early Childhood Workforce
2. Enhance the Quality and Consistency of the Early Childhood Programs
3. Enhance Access to Early Childhood Education and Effectiveness of ECEs

(Child Care Human Resource Sector Council, 2007)



The ECCE Blended Learning program has been an important part of PEI's response to these national recommendations. Prior to the beginning of this program, the sector had over 50% of the educators with no training or certification in early childhood. This training will have served to enhance the size and capacity of PEI's trained early childhood workforce, while also growing the knowledge and skill base of the sector, resulting in higher quality and consistency of programs.

### RESULTS AND ACCOMPLISHMENTS

Holland College holds to a high standard for competency based learning in the classroom, and this remained a primary objective for the ECCE-BL Program. This blended model was influenced by the students' involvement in the workplace; student experiences and issues were used to build the curriculum and assessments were practical and authentic, requiring students to demonstrate their learning in real and meaningful ways, in their workplace, in the classroom, and online.

This video provides a snapshot of student impacts from approximately half-way through their training (clickable link) Continuing Education and Lifelong Learning . Realizing the benefits to these educators, it is easy to understand the rippling positive impacts on the children, families, and colleagues with whom they worked.

Program objectives related to students, industry, and college. The students, via this educational opportunity grew their own skills, knowledge, and capacities for learning. They were eligible to access higher wages and they gained an academic pathway to further education and career laddering. The industry benefitted with an increase in qualified, certified early childhood educators working in licensed programs and new training levels that better correspond with the provincial educator certification levels. The college benefitted from the government sponsorship that enabled the development of an alternative delivery option for the early childhood curriculum, as well as a growth in faculty skill to develop and deliver training via distance.

As Holland College evolves and responds to emerging student needs, we are actively creating a more flexible and accessible college. The ECCE-BL program demonstrates the college's commitment to a new flexible and accessible academic model; one that continues to build firmly on essential industry standards, while creating increased access to the programs that enable people to become professionals in these industries.

### INTERNATIONAL VALUE

The ECCE-BL program is transferable in that the majority of the curriculum resides in an online learning management system, meaning it can technically be shared and accessed globally. Prince Edward Island is a comparatively small province, but the rural regions have often struggled to access consistent, high quality educational opportunities. For the in class component of this model, the program was delivered in each of the three provincial counties. Much of the digital material created for the blended learning program has been accessed for the full time classroom, and for delivery of ECCE courses in Henan and Jiangxi, China.

Pedagogically, the content is applicable because it is designed to provide the learner with a broader exposure to early childhood, while prompting the individual to explore how these theories and practices apply to them in their personal, localized settings. The program incorporates an introduction to recent trends in the profession, while ensuring a solid foundation in child development and play based, emergent curriculum practices.

### WORDS OF WISDOM

A core element that underpins the ways the ECCE-BL program was successful is that of collaborative relationships. In order to aspire for the most collective success, all partners involved must play active, fully committed roles. Not only the agencies, but the individuals must understand and value the initiative, and the shared benefits.

As well, being a relatively small institution with limited technical resources, and working initially with a team of instructors with little to no experience developing and delivering curriculum via distance, the program assumed a no-fear approach to change, put the pieces into place as we went, and didn't avoid trying out new approaches. Input and feedback from students enabled an evolving, more manageable model to grow over time, and minimized any difficulties related to territory/boundaries that can occur when we work in silos. Remain open to ideas, and do not shut down seemingly insurmountable odds... instead, focus on building, bit by bit, the structure needed to overcome them!

### NEXT STEPS

Prince Edward Island remains committed to growing the skills and knowledge of incoming early childhood staff, and Holland College will continue to offer 1<sup>st</sup> year courses through a part time, blended model to ensure access to the training required for their work in the early childhood sector.

Internationally, the curriculum will continue to be used by instructors who deliver ECCE courses in our programs in China.

The partnership team who sponsored, developed, and delivered the ECCE-BL program will serve as contributors to the emergence of technology enhanced initiatives, and also as a resource to others locally and beyond our province. The positive outcomes and lessons learned from the ECCE-BL program could be useful and inspiring to small or medium sized institutions as they navigate issues related to cross sectoral partnerships, limited resources, and student preparedness for distance/blended learning.

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# ACCESS TO LEARNING AND EMPLOYMENT

## SILVER: NORTH ISLAND COLLEGE, THE REMOTE WEB-BASED SCIENCE LAB (RWSL) CANADA

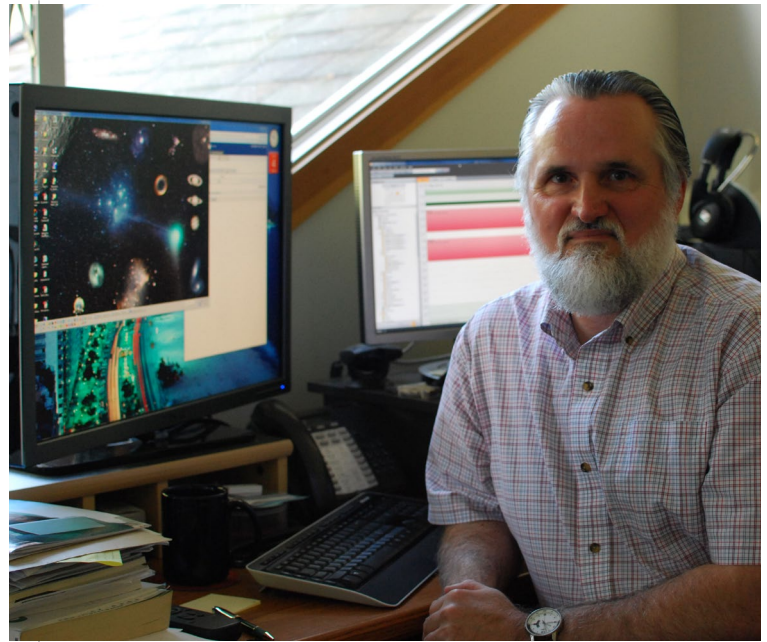
### INTRODUCTION

Since 1975, North Island College (NIC) has been responsible for offering opportunities to some 159,000 residents in a geographic area encompassing 80,000 square kilometres. Because of this population-to-area ratio, NIC has spent 40 years focusing on technological innovation in education to serve individuals in both urban and remote areas.

In 2002, Albert Balbon and Ron Evans created a system to allow distance astronomy students to explore the universe from the comfort of home using a telescope remotely operated over the internet. That technology paved the way for development of the Remote Web-based Science Lab (RWSL) in 2004. With limited core funding and dedicated facilities, NIC provides students a unique opportunity to pursue Science, Technology, Engineering and Math (STEM) related courses that are hands-on and in real-time from any location with an internet connection.

### AWARD WINNING PROJECT

The Remote Web-based Science Lab (RWSL) is a North Island College innovation that currently allows students and educators to conduct high quality online science labs in real-time from anywhere in the world via the internet. Since its creation in 2003, students have used RWSL to access research-grade lab equipment including microscopes, a telescope system, spectrometers, robotics and more. The RWSL technology is an effective channel for delivering Science, Technology, Engineering and Math (STEM) education to students who may not otherwise have access to this equipment and learning. RWSL provides students global access to affordable, hands-on experiential learning in a collaborative, social, online environment that is reflective of 21st Century learning principles. Sharing lab equipment and facilities within and between campuses and institutions increases utilization rates and offers dramatic cost efficiencies, a critical consideration in today's climate of decreasing public education budgets. NIC was the lead in the development of the North American Network of Science Labs Online



*Albert Balbon has been developing innovative technology for distance education for over 30 years at North Island College.*

(NANSLO) lab, which has partnerships between several colleges in the United States. Through the Consortium for Healthcare Education Online (CHEO) project, the RWSL offers healthcare education to thousands of students at colleges throughout the United States.

### RESULTS AND ACCOMPLISHMENTS

The original commitment of accessibility remains as the core principle of RWSL, which puts high-end science equipment and technology into the hands of those who otherwise would not have access. RWSL allows students and instructors to blend theory with hands-on experiential learning from anywhere. Students work in collaborative, inquiry-based environments that encourage critical and creative thinking. The RWSL Lab provides an opportunity to take classes when it is not possible to attend training labs in person. For example, a military student is able to complete studies regardless of their current location.

### INTERNATIONAL VALUE

The RWSL project knows no boundaries. The lab has been accessed by students in South Korea, Philippines, New Zealand, Turkey, Canada, and United States (including Alaska and Hawaii). Our project benefits international professional education in that students can be anywhere with an internet connect and still have access to these training labs. Our projects allow student mobility and allow other institutions to set up similar remote labs or to utilize ours. North Island College has collaborated with Great Falls College in Montana and

Colorado Community College to establish a network of labs available to students both in North America and throughout the world. Similar remote labs could be duplicated at institutions anywhere in the world.

### WORDS OF WISDOM

By collaborating with other institutions NIC has been able to scale the technology and expand our educational and technological reach. The biggest lessons are finding like-minded individuals and institutions who shared in our values and were committed to grow and expand the technology.

### NEXT STEPS

Now that the technology has been proven, NIC is seeking to identify potential partners who can utilize the technology. We are also working to identify opportunities to use this technology in new markets, for example, industrial training applications. We are working to promote our successes to institutions around the world.

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## ACCESS TO LEARNING AND EMPLOYMENT

### BRONZE: WUHAN RAILWAY VOCATIONAL COLLEGE OF TECHNOLOGY CHINA

#### INTRODUCTION

Founded in 1956, Wuhan Railway Vocational College of Technology is a full-time higher vocational institution specialized in railway programs, sponsored by Hubei Provincial Government. Located in Wuhan, Hubei province, China, the college has an enrollment of more than 12,000. It is one of China's national exemplary vocational colleges, the national top fifty colleges with good employment, and the president unit of Railway Transportation Vocational Education Group as well. The graduates of the college enjoy great advantages in employment, and the graduate employment rate remains at a level of 98% and above. Consequently, the college has moved into a favorable situation for both enrollment and employment.

#### AWARD WINNING INSTITUTION

The college serves industries: cooperating with Wuhan Railway Bureau, it built the in-campus high-speed EMU simulation driving room, which is the most advanced in China; cooperating with Taiyuan Railway Bureau, it constructed the first high-speed railway safety warning and accident rescue training center in China. The college serves the local economy: it provides a large number of outstanding graduates for Wuhan Railway Bureau and Wuhan Metro Group. The college serves enterprises: it held the national railway industry vocational skills

competition; faculty and students participated in the joint debugging of equipment before Wuhan-Guangzhou high-speed railway and Beijing-Fujian high-speed railway were put into operation. The college designed and developed the "pin" and the "intake manifold" of the new specified vehicle for China South Locomotive & Rolling Stock Cor. Besides, the college trained railway technical personnel for China Railway Corporation and railway bureaus, and the trainees reached more than 8,000.

The college was the first one to offer new high-speed related programs in China. The faculty of the college developed more than 10 course books of high-speed railway, among which the English version of *Track Construction and Maintenance of High-speed Railway and Construction Organization and Management of High-speed Railway* were published in India. The college trained the first high-speed railway technicians, and 60% employees of Wuhan high-power locomotive maintenance station and Wuhan bullet-train station come from the college, about 1/3 employees of Wuhan Metro Group come from it, the first 60 chiefs of stations along Wuhan Metro Line 3 also come from it. The college works closely with Wuhan Railway Bureau and Wuhan Metro Group to train students and promote the modern apprenticeship.

#### RESULTS AND ACCOMPLISHMENTS

After 60 years of development, the college has established the guiding principle: "base in Hubei, serve railways, focus on human development and create excellence". The college is deeply integrated and cooperate with large rail transport enterprises such as Wuhan Metro, Guangzhou Metro and Chengdu Metro to create "work-integrated learning" cultivation mode, improve the quality of talent cultivation and offer outstanding graduates for rail transport enterprises.

The college trains technical personnel for large rail transport enterprises such as China Railway Corporation, Wuhan Railway Bureau, Wuhan Metro Group, Guangzhou Railway (Group) Company, Qinghai Tibet Railway Company and so on. It also holds staff skills competitions organized by China Railway Corporation and Wuhan Railway Bureau.

### INTERNATIONAL VALUE

The college spares no effort to promote international exchanges and cooperation: Let the world know it, let it understand the world. In the light of the principle “Where there is a high-speed railway, there is our service!”, the college serves China’s “One Belt, One Road” initiative and strives to become the window for the world to know China’s higher vocational education in the high-speed railway field. At present, the college has successfully cooperated with Banphai Industrial and Community Education College on Sino-Thailand railway talents cooperative program.

### WORDS OF WISDOM

**Advice:** The railway college adheres to the school-running pattern “Railway-oriented, railway-integrated, railway-supplied, railway-boosted”, insists on college and enterprises “double subject” training mode and the modern apprenticeship training mode. In the international exchanges and cooperation, the college persists in the principle: “base on specialties, rely on platforms, seize the opportunities and take initiative to get achievements”.

**Lessons:** The faculty construction restricted the quality of talent training.

### NEXT STEPS

**Next steps:** Further optimize the college operating conditions, strengthen the construction of faculty, improve learners’ access to employment, and put great efforts to international exchanges and cooperation.

### Future goal:

To continue to build a world-class railway vocational college.

### CONTACT

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The image is a square graphic with a purple-to-magenta gradient background. A diagonal line from the top-right to the bottom-left divides the space. On the left side, there is a large, light purple silhouette of a laboratory flask. Inside the flask, two dark purple gears are shown meshing together. Above the flask, two solid purple circles of different sizes are positioned. In the bottom right corner, the text 'APPLIED RESEARCH AND INNOVATION' is written in a bold, white, sans-serif font, stacked in three lines.

**APPLIED  
RESEARCH  
AND INNOVATION**

# APPLIED RESEARCH AND INNOVATION

## GOLD: BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY CANADA

### INTRODUCTION

With over 47,000 students enrolled annually, BCIT is one of British Columbia's largest post-secondary institutions. Their goal is to be integral to the economic, social, and environmental prosperity of British Columbia through its applied education model of student learning.

Founded in 1964, BCIT has established itself as one of the leading educational institutes in engineering; health sciences; business; computing; trades, apprenticeship and technical programs; and applied research.

Renowned for offering hands-on, practical learning, BCIT graduates are prepared to succeed in their careers from day one. BCIT's curriculum and applied research endeavors are industry connected, and help ensure, year-after-year, that they are advancing the state of practice.

### AWARD WINNING INSTITUTION

BCIT researchers have at their disposal, 53,800 sq.ft. of laboratory space, and a \$28 million Centre for Applied research and Innovation. With \$10 million in research grants and \$2.5 million of industry services contracts yearly they are responsible for 50+ collaborative industry projects and 1,000+ applied research projects annually. While there are many highly qualified and respected researchers who contribute to BCIT's outstanding applied research record, there were 3 researchers selected as a proxy for all the researchers, because the worldwide prominence their research has garnered.

Dr. Fitsum Tariku was BCIT's first Canada Research Chair {CRC}. His area of expertise is Whole Building Performance. His CRC was recently renewed by NSERC for a 2<sup>nd</sup> term of 5 years. In addition to his CRC, he has received awards for the Best Journal Paper Award, Building Simulation: an International Journal, Housing Studies Achievement Award for Doctoral Thesis, Canada Mortgage and Housing, and finally, Industry Support Award, National Research Council of Canada, Institute of Research in Construction.

Dr. Paula Brown holds the CRC in Phytoanalytics and has numerous awards for her work in Natural Health Food Products research. In 2016 she received the "Neil Towers Award" from the Natural Health Product Research Society of Canada, the Herbal Insight Award from the American Herbal Products Association and First Place Blue Ribbon award from the American Urological Association. Over the years before 2016, she received a total of 7 different awards for her research.

Dr. Hassan Farhangi, Director of the Smart Microgrid research group, holds 4 patents and has contributed numerous publications to international scientific journals. Most recently because of his prominence in the Smart Microgrid field, he was honored by being made chair of the Canadian Smart Grid Research Network (NSM G-Net), which is a network of Industry, academic institutions and students in Canada.



### RESULTS AND ACCOMPLISHMENTS

Students have benefited and been impacted directly by applied research in each of their programs and industry capstone projects.

The NSM G-Net chaired by Dr. Farhangi, has been responsible for contributing to the education of 107 students (49 PhD, 47 MSc and 18 Undergraduate) across Canada. In addition, numerous corporate students were educated on the intricacies of Smart Microgrid theory and application. They were exposed to hardware and software innovations, collaborations with manufactures, service providers and providing hands-on experience to solve current problems in the substation simulation lab.

A major responsibility of a CRC holder, is the training of students in their particular field. In the 1<sup>st</sup> term of his CRC, Dr. Fitsum Tariku has developed new curricula for both undergraduate and graduate programs. With only 2 years

into her CRC, Dr. Paula Brown supervises 8 graduate students. Also each year she has had 3-4 undergraduate students intern in her laboratory.

The results from the applied research from the three researchers profiled have impacted the community: Dr. Fitsum Tariku's research has resulted in the development and implementation of new building standards for BC which has eliminated the "leaky condo" problem. Dr. Hassan Farhangi's smart grid research has been a major contributor to the modernization of the electrical grids across Canada. Dr. Paula Brown's work on Aloe vera has become the worldwide gold standard for Aloe vera production.

### INTERNATIONAL VALUE

Some specific examples of international value include Dr. Farhangi's establishment of a Canadian national center for smartgrid research to deal with the significant challenges of the world's aging utilities infrastructure (BCIT Smart Microgrid). This research program included participation from global manufacturers and now the findings are benefiting any islanded or remote locations with power sustainability needs. This includes Institutes of higher education in China, Brazil, the Netherlands, Germany, Saudi Arabia, Turkey and the USA.

Another example is the progressive approach that BCIT's Natural Health & Food Products Research Group has made in the identification of fraudulent health and food products. Under the direction of Dr. Paula Brown the research group jointly works with students and institutions of higher education in the USA, India, China, Brazil and Europe to create new methods and standards.

Vancouver Canada, like many other cities in the world can experience excessive rainy weather. Dr. Fitsum Tariku, developed a program of research around construction quality to prevent leaky condos. These best practices are now in the process of implementation in the USA, France, Japan, Germany, Belgium, and the Netherlands.

### WORDS OF WISDOM

Key Lessons Learned:

- 1) You must have institutional buy-in for Applied Research as an organizational goal. Creating a viable Applied Research environment encompassed all aspects of an organization from budgets and funding, to knowledge dissemination, to industry partnerships. Done well it can become a cornerstone for the organization's marketing plan.

- 2) You must have a key leader that understands all aspects of the Applied Research world. Applied Research is different from basic research and requires that the Dean, Director or VP for Research is knowledgeable not only in performing research, but also in the administration of research. Often successful researchers do not make good research administrators. Successful researchers want to do research, they don't want to get involved in the minutia of dealing with contracts, collective agreements, policies and governance.
- 3) Applied Research must be Champion driven. Your research programs must be led by someone with a vision and a passion for the research they are doing: someone who will be able to carry the research through the lean times, and take advantage of variations in funding.
- 4) You must keep the client in mind. For applied research to be successful, the client's needs and outcomes, come first.
- 5) You must be willing to take the long term view. You cannot grow world class, country leading research programs overnight. It takes time to build infrastructure, to build connections and to build a reputation.

### NEXT STEPS

To increase our external partnership network and take our results to the world. It might sound cliché but we have reached the point at BCIT where we need bigger horizons in many of our projects. There is only so much room to grow on any campus and in many cases the technology and value from the research work must be applied in the real world in order to move forward. In taking our projects from lab to demonstration, the next step is to put the results into practice and to share the knowledge gained. We truly believe that the reason we have been successful is our industry and real-world first view of applied research.

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# APPLIED RESEARCH AND INNOVATION

## SILVER: LAMBTON COLLEGE CANADA

### INTRODUCTION

Lambton College established the Applied Research & Innovation department in 2007 to provide applied research, development, technical services, technology transfer, commercialization to industry, and organizations nationally.

This department has consistently outperformed its larger Canadian counterparts with respect to research growth, volume, and intensity, which has led to recognition as an applied research and development hub due to the college's expertise, capacity and capabilities in many unique areas.

These areas include a wide range of technology-related themes such as: advanced materials, chemical process design and optimization, instrumentation and process control, bio-industrial technology, advanced manufacturing, water, energy, and information technology. In recent years, the College has also extended its research portfolio into new sectors including health and wellness, social sciences and business. These growing initiatives have provided ongoing support to many organizations and small and medium-sized enterprises (SMEs).

Last year, Lambton College recorded a 70.3 per cent increase in research revenue, totaling \$11,382,476 up from \$3,108,000 in 2013. Since its inception, college research initiatives have also received more than \$20 million in funding from federal and provincial agencies.

As Lambton College looks to the future, it will continue to stand out against other colleges by leveraging its unique strengths as a global leader in applied research and development.

### AWARD WINNING INSTITUTION

Canada's Sarnia-Lambton region is home to the biggest cluster of petrochemical and refining plants second only to the province of Alberta. The region specializes in production of plastics, synthetic rubber, and chemicals. Many chemical and material processing SMEs are

selecting the area for their pilot and production projects due to the existing local capacity. Additionally, the local economy is rapidly evolving, complementing traditional, local refining and petrochemical production with an intentional focus on the emerging, bio-based and renewable energy industries. In recent years, there has been a significant local, provincial and national effort to diversify regional industry, due to its advantages including a) proximity to major markets, b) access to raw materials and feedstock, c) well-trained and dedicated workforce, and d) culture of collaborative innovation. Based on strong community direction that recognizes Sarnia-Lambton's natural fit for ongoing developments in the fields of industrial biotechnology and sustainable energy, two local initiatives, the Bio-hybrid and Chemistry Cluster and the Sarnia-Lambton Sustainable Energy Cluster were established. In these cluster hubs, chemical, bio-chemicals and energy start-up businesses will bring strong innovative technologies and entrepreneurial skillsets to the region.

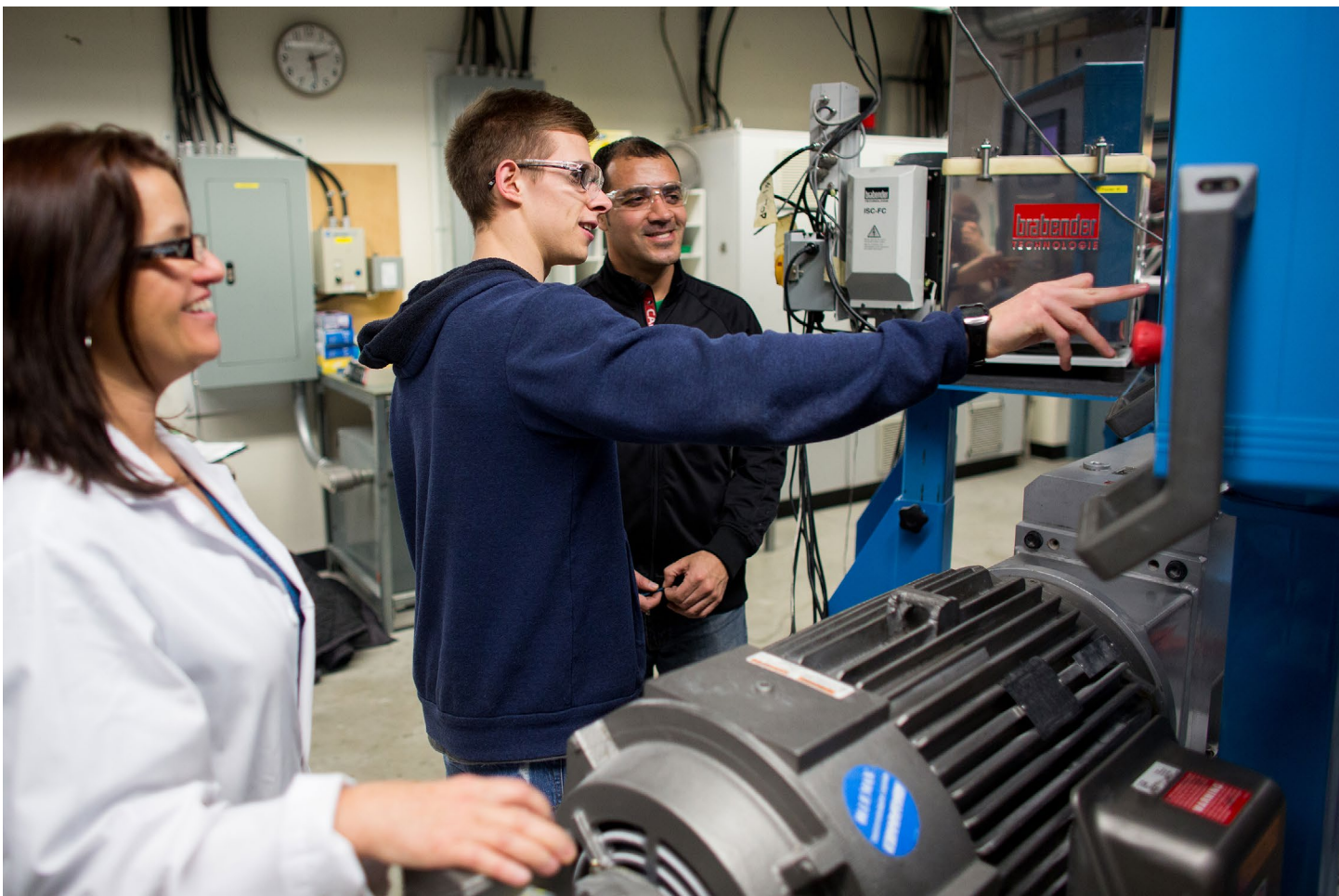
Still, two major growth challenges face these clusters. Most of the companies within the clusters are start-ups or SMEs, and offer a wide range of novel Canadian and international industrial processes, which need to be validated, instrumented, automated, optimized, and scaled up prior to commercialization and full production. Many of these companies either do not have Research and Development (R&D) capacity or their R&D is limited and focused on their technology, rather than multi-faceted support required for commercialization and full-scale process development. Additionally, due to the high cost of in-house R&D, the activities of most companies have been outsourced, downsized, moved, or closed in recent years. Lack of applied R&D is a significant roadblock against successful commercialization and expansion of the cluster.

As the only post-secondary provider in the area, and in response to this unique regional priority, Lambton College has supported regional, provincial and national visions in two ways: academic training and applied research. Lambton College included the establishment of a Centre of Excellence in Energy & Bio-Technologies as a strategic priority in its Strategic Mandate Agreement (2013-2018) and identified instrumentation, process control and optimization as one of its key research priorities listed in its Applied Research & Innovation Strategic Plan (2013-2018).

Lambton College Applied Research supports the community, region, province and national strategic visions. By providing research and development support, Lambton College is able to impact the region, province and the country by attracting new industry and investments, improving industry competition, environmental impact, economic impact and socio-economic impact.







A unique partnership has also been developed with the Western Sarnia-Lambton Research Park, utilizing the strengths of each organization to form an innovative network, called The Innovation Bridge, which is unlike anything else offered in Ontario. The formation of this strategic alliance has allowed the College to provide a wide range of research, development, incubation, acceleration and commercialization services to a variety of SMEs, raising the region’s profile as a desired destination for start-ups across the province, particularly in the areas of Energy & Bio-Industrial Technology.

Overall, the objective of Applied Research & Innovation at Lambton College has always been to support and advance industry and community through excellence in applied research, commercialization, entrepreneurship and scholarly activities. This mission has been strategically and successfully carried out over the past eight years, allowing Lambton College to support regional industry while contributing to the economic growth as well as social, environmental and educational impact for the region and province.

## RESULTS AND ACCOMPLISHMENTS

The mission of Lambton College Applied Research & Innovation is to support and advance industry, community and Canada through excellence in applied research, commercialization, and scholarly activity. Lambton College is committed to pursuing research and development activities to:

- Strengthen and enhance staff / faculty development and student learning through involvement in applied research
- Support economic development in the region and beyond through partnerships in applied research, innovation and commercialization activities
- Improve the productivity and increase the competitiveness of partnered industries and organizations, in particular small and medium sized enterprises (SMEs)
- Support the creation of new jobs through successful applied research and commercialization projects

All research projects are faculty-lead and involve students, thus providing a real-life applied research experience. Student involvement has been extended by hiring students and recent graduates as research assistants through collaborative research, course-based and capstone projects in partnership with external research partners including regional SMEs. Since 2013, more than 157 collaborative research projects and over 200 course-based projects have provided students with such experiential opportunities. These activities resulted in various opportunities for domestic and international students, including 19 paid graduate positions, 176 paid research positions and more than 250 unpaid student positions.

Through applied research Lambton College has provided ongoing support to many organizations and small and medium-sized enterprises (SMEs) and helped develop 18 new prototypes, seven prototype improvements, five pilot plants, 35 new processes and technologies, 12 improved processes and technologies, and 71 services.

### INTERNATIONAL VALUE

Lambton College Research is community-minded with a global outlook. Many research projects being conducted through college partnerships are connected to international challenges such as energy, water, environment or food innovations. The College also has a growing list of research partners who have a strong focus on internationalization including Lirrico Technologies, Jungbunzlauer, Lanxess, CARBER, Celestica, GreenField Ethanol, BIC, CENNATEK, and AVEtec Corp. Two years ago, Lambton College partnered with KmX Corporation to optimize and scale up their membrane-based technology for integration with RWL Water, an Israeli company, for the treatment of industrial wastewater from oil and gas and mining plants. This technology is providing a global solution to a critical problem that companies within this industry face. Another partnership with global start-up Lirrico Technologies Ltd. saw the development of a new mobile device application for residential energy monitoring and management. With operations in Ontario, U.S.A. and Hong Kong, Lirrico commercialized the new developed application, allowing them to expand into the European smartphone market. In the past year alone, Lambton College's Research & Innovation department has hired 52 international students for paid research positions.

In addition, Lambton College Applied Research and Innovation Department collaborates with organizations with international focus including Bio-industrial Innovation Canada (BIC). BIC's focus is to attract and invest promising technologies and companies globally and Lambton College has been acting as applied research and development arm for BIC.

### WORDS OF WISDOM

- Applied Research in college becomes the **core access point** for industrial R&D.
- Applied Research provides a comprehensive set of **economic, social, environmental, training and entrepreneurial** impacts.
- Communities with the help of Applied Research can **diversify** their industrial portfolio, **attract** companies and **attract or retain** youth.
- Successful Applied Research at the College means Successful Community, province and country.

Over the years, Lambton College has learned some of following on our path to success in Applied Research:

- Assign a **visionary leader** for your project/initiative.
- Build comprehensive **partnership and collaboration**.
- Grow according to your **core strength**.
- Build based on **long term vision** not short term.
- Attract and retain **high quality technical people**.
- Build a **good operation team**.

### NEXT STEPS

- Build infrastructure for more research centres and training.
- Build more international projects.
- Help companies to export their new and novel technologies.
- Build focused and unique applied research centres.
- Enhance partnership with universities nationally and globally.
- Attract high quality people.

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# APPLIED RESEARCH AND INNOVATION

## BRONZE: CIFP ARETXABALETA LANBIDE ESKOLA LHII - TKGUNE RANGE EXTENDER HYBRID VEHICLE PROTOTYPING BASQUE COUNTRY

### INTRODUCTION

Addressing the request of the SMEs in the Basque Country, the Tkgune programme was launched by the Basque Deputy Ministry for VET in the 2014/2015 school year. In line with the smart specialization strategies fostered by the Basque Government, the main goal of the programme is to promote the collaboration among VET centres and SMEs, in order to provide them with innovation services.

The project analysed below, developed in collaboration between Aretxabaleta VET centre and Fagor Automotive is a clear example of the work carried out within TKGune.

The coordinated teachers/enterprise workgroup has managed to turn an electric vehicle into a "Range Extender" type hybrid vehicle, implementing a prototype vehicle not to be traded. During the process, a combustion motor was coupled to an electric one in order to increase the vehicle's autonomy. However, the main goal was to acquire the know-how necessary to later introduce that technology in the company.

### AWARD WINNING PROJECT

Aretxabaleta VET Centre is one of 29 VET centres involved in the Tkgune programme. The VET centres are divided into 5 different strategic environments (manufacturing, automotive, automation, energy, and creative industries), fixed in line with the Basque smart specialisation strategies and taking into account, both the capabilities of the VET centres and the real needs of the Basque SMEs. Each centre taking part in the programme is focused on a unique strategic environment where a multicentre coordinated workgroup is created in order to offer services to the SMEs.

Aretxabaleta VET centre is working in the automotive field, and the following is a clear example of a successful project; where a technical labour has been done collaboratively with Fagor Automotive company, billing the enterprise for it.

Concretely, this project has answered to the need of the company to deepen knowledge of the technology related to new generation vehicles. For that, the workgroup has managed to turn an electric vehicle in a "Range Extender" type vehicle. That is, a combustion motor has been coupled to an electric one in order to increase the vehicle's autonomy. The result of the work done has been the implementation of a prototype range extender vehicle, which was not aimed to be traded. The company wanted to acquire the needed expertise to develop related services in the future and to introduce herself in a new emerging market, and the current project was a way to get it. The project carried out has been very demanding technologically and has required the VET centre and the enterprise to share information and contribute expertise by complementing each other. The result has been beneficial for both agents, as they have increased their knowledge related to the subject. The specific work to be done, including all the tasks carried out during the project have been documented and are available, in order to be analysed with the students in the classrooms.

In a few words, these have been the followed steps during the project:

- Firstly, a prototype was developed starting from several components. For that aim, the heat engine was booted and all kinds of assemblies, adjustments, electrical facilities and cooling system installations done.
- Once launched, the prototype in question, static and dynamic tests were conducted in order to validate it.
- Meanwhile, the project was developed and all the steps documented in order to provide free access education contents to other teachers.

### RESULTS AND ACCOMPLISHMENTS

The project developed is a step beyond in the company/VET centres collaboration, although there has always been a close relationship between both agents (students conduct their practices in nearby enterprises, future workers are formed in VET centres and current workers receive advanced training courses there). The relationship with companies is a fact, but offering technological service is a step further in this collaboration. As a result of this collaboration, SMEs that otherwise would have little opportunity to innovate their product and processes have the chance to become more competitive in a steadily more demanding market. It also represents a new source of funding for the centres, enabling them to live not only upon public funds but on the private ones as well.

Participating in these sorts of projects, with marked technological component, is a great opportunity for teachers. When faced with a real problem, they are in need of acquiring new knowledge or developing new skills and the support of industry is very important for that purpose. It also represents a motivation for the teacher to continue training their own and update themselves.

The students in consequence to having these teachers, who know a lot about the latest technologies, have access to a higher quality education. The curriculum is modified and new materials are implemented. Moreover, the development of these projects allows studying real cases in the classroom, even allowing students to participate in some way. Through this, the learning process is more meaningful for students.

### INTERNATIONAL VALUE

During the 2015-2016 school year, the Tkgune programme has offered 354 services up to 252 different companies in the Basque Country. This data involves both improvement and innovation projects; it is unquestioned that is a useful tool to address the real needs of the SMEs. Moreover, apart from the advantage for the companies, by developing this project the teachers' skills are continuously updated and the student can deal with real cases in their learning process. Consequently, it is profitable for the SMEs to innovate their product and processes, while it enables the improvement of the teaching.

As it has been successful in the Basque Country, it could be transferred to other VET systems; considering the following elements:

- A close and trust based relationship between VET centres and SMEs.
- Good trained teachers, with professional competences.
- Willingness of VET teachers to get involved. New roles.
- Culture of innovation in VET centres and governmental support.

### WORDS OF WISDOM

The Basque business structure is mainly composed by SMEs. As in many other countries, most governmental programmes implemented do not meet the real needs of SMEs. That is because there is not a close relationship between the small enterprises and the technological agents taken into account when planning by politicians. In order to fill this gap, the role to be played by the VET centres is crucial.

The VET centres, have an accumulated expertise that can be very useful for the enterprises and the close relationship existing within both agents makes them the perfect allies. In addition, both the company and the teachers bring their knowledge and complement each other to develop the projects, so it's beneficial to all the participants.

Nevertheless, in order to ensure the success of the programme, training of teachers and providing them with resources must be taken into account.

### NEXT STEPS

The Basque Deputy Ministry for VET has firmly supported the Tkgune programme. Based on the results attained it can be assumed this will continue in the years to come. The objective in the short term is to continue expanding the programme and to involve more centres and teachers in the new working model.

Facing the future it is necessary to find new funding sources to enable the VET centres to make the programme sustainable, renew the equipment, and train their professors in the latest technologies, essential to continue offering quality services to SMEs. In that sense, it is important that the continuous training of the teachers should be a priority for the future.

The future main work regarding funding is to reinforce payment from the involved companies for services, and to get the approval of the Department of Economic Development and Competitiveness, by featuring Tkgune as an effective innovation actor in the Basque business network.

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**ENTREPRENEURSHIP**



# ENTREPRENEURSHIP

## GOLD: NANJING INSTITUTE OF INDUSTRY TECHNOLOGY CHINA

### INTRODUCTION

As Vice-Chairman of the Unit of the National College Alliance of Innovation and Entrepreneurship, and Chairman and Secretary General of the Unit of the National Higher Vocational College Alliance of Innovation and Entrepreneurship, Nanjing Institute of Industry Technology (NIIT) boosts the implementation of the national strategy of mass entrepreneurship and innovation. NIIT actively supports its teachers to carry out site application technology research and development; promotes teachers and students to participate in innovation and entrepreneurship; serves regional economic development, industrial restructuring, upgrading through scientific and technological innovation; and constructing of provincial high-end government-college-industry- research. In the past 5 years, students of NIIT won 104 first prizes in the National Innovation and Entrepreneurship Competition, obtained 366 patents, and had more than 200 autonomous student innovation teams and R&D projects annually. The number of approved invention patents and utility model patents are taking a leading role in similar institutions in China.

### AWARD WINNING INSTITUTION

The Institute meticulously implements the decisions and plans of the CPC Central Committee and the State Council on “mass entrepreneurship and innovation”, takes the initiative to adapt to the new normal economic development, deepens the reform of innovation and entrepreneurship education, and achieves the interactive development of “innovation leading to entrepreneurship, and entrepreneurship promoting employment”. In recent years, the Institute has received a number of national and provincial honors and media coverage of its work, enabling the Institute to become a pacesetter and advanced model of innovation and entrepreneurial reform in national higher vocational education. The Institute was elected to be the Vice-Chairman of the National College Alliance of Innovation and Entrepreneurship under the direct guidance of the Ministry of Education, and the chairman of the National Higher Vocational College Alliance of Innovation and Entrepreneurship.

The Institute is promoting the reform of talent cultivation and cultivating mechanisms. First, through innovation and entrepreneurship workshops for the willing and potential students, and establish innovation and entrepreneurship files to objectively record and quantitatively evaluate the students’ innovation and entrepreneurship activities. Secondly, lectures in various forms are organized to broaden students’ horizons and stimulate their innovation and entrepreneurship enthusiasm. More than 20 innovation and entrepreneurship lectures are held annually,

attracting more than 8,000 participants. Thirdly, special innovation and entrepreneurship training are offered to improve students' comprehensive quality, innovation, and entrepreneurship ability. More than 1350 students are trained receive special training course each year.

The Institute is optimizing its innovation and entrepreneurship education curriculum. Adhering to the principles of integrating compulsory courses with optional courses, integrating overall guidance with classified guidance, and integrating general education with systematic education, the Institute achieves full coverage and classified guidance of innovation and entrepreneurship education. First, the required course of innovation and entrepreneurship education for 18 hours is offered in the series of courses of Employment and Entrepreneurship Guidance to provide general education in innovation and entrepreneurship for all students. Secondly, nine public elective courses in innovation and entrepreneurship education such as Fundamentals of KAB College Students Entrepreneurship, Entrepreneurship and Employment, Entrepreneurship Education and College Students' Entrepreneur Internship Network are offered to provide individualized and specific guidance for the students with innovation and entrepreneurship interest. Thirdly, the compulsory course of innovation and entrepreneurship education theory for 32 hours and the comprehensive training course of simulated college students' entrepreneurship for 24 hours are offered for the students majoring in economics and management, and the "tripartite" entrepreneurship education teaching model is adopted, namely, teaching, students' participation and extracurricular practice account for 1/3 respectively.

In addition to the above, the Institute has built a "one-stop" innovation and entrepreneurship service platform. The corresponding service places for different stages of innovation and entrepreneurship are set up by the Institute, to realize "one-stop" service. This includes counselling services and simulations of entrepreneurial projects.

Finally, the Institute is strengthening the construction of "maker space" and "maker culture". The use of mentors, from NIIT and local businesses, an online simulation platform, and workshops, students cultivate a passion and know-how for entrepreneurship.

## RESULTS AND ACCOMPLISHMENTS

The Institute promotes the students' high-quality entrepreneurial activities with generalized system of preference of innovation education, aiming at coordinated development of the students' innovation and entrepreneurship education. NIIT focuses on building the "mass entrepreneurship and innovation" pattern of "theory-practice integration, teacher-student interaction, comprehensive education, major support and focus on transformation", and establishes the "maker space" service system for all students, to cultivate students' innovation and entrepreneurship, stimulate students' enthusiasm for innovation and entrepreneurship, and help students to realize their innovation and entrepreneurship dreams.

The Institute has won 61 national first prizes in recent three years, including 10 first prizes, 13 second prizes and 7 third prizes in the National Vocational Students Skills Competition, and 21 first prizes, 32 second prizes and 26 third prizes in the 10th National "Invention Cup" Innovation, Entrepreneurship and Creativity Competition, and Outstanding Organization Award for the Institute for five consecutive years. The Institute won second prize in the 14th National "Challenge Cup" Competition in 2015, becoming the higher vocational college with the best performance in the national competition. In the "Challenge Cup" provincial competition, the Institute won 1 grand prize, 1 second prize and 1 third prize, becoming the higher vocational college with the most finalists, the most prizes and the best performance in the provincial competition, and at the same time, becoming the only higher vocational college with national competition finalists in this provincial competition. A number of innovations achievements have received social attention and media coverage, and attracted venture capital funding. In recent years, among our nearly 600 students winning national and provincial recognition, 65% of them have patents, or innovation and entrepreneurship competition awards above the provincial level.

## INTERNATIONAL VALUE

At present, the Network Platform of National College Alliance of Innovation and Entrepreneurship led by Tsinghua University is about to go online. The Alliance has also reached cooperation agreements with Massachusetts Institute of Technology, Berkeley and many other well-known universities to jointly realize international exchange platform and network big data platform of innovation and entrepreneurship education, establish online and offline organizational forms, maximize the Alliance members' nationwide coverage in the true sense, and establish an important platform to promote international exchange of

innovation and entrepreneurship education in colleges. As the Vice-Chairman of the Unit of the National College Alliance of Innovation and Entrepreneurship, NIIT has also reached cooperation agreements to promote innovation and entrepreneurship education with numerous universities of science and technology in Taiwan and many partner universities around the world, and at the same time, by virtue of international students program, it helps Myanmar and other Southeast Asian countries to cultivate innovation and entrepreneurship talents, forming a demonstration effect and radiating capacity.

### WORDS OF WISDOM

- A.** Building a “comprehensive” system of innovation and entrepreneurship education, and achieving organic integration of professional education and innovation and entrepreneurship education.
- B.** Building a “whole-process” innovation and entrepreneurship service system, and achieving organic integration of sustained assistance and professional guidance.
- C.** Implementing “four availabilities” of innovation and entrepreneurship guidance service. First, the management is standardized with institutional availability. Secondly, it is fully functional, with site availability. Thirdly, it has strong and qualified teachers, with manpower availability. Fourthly, it has adequate logistical support, with funding availability.
- D.** Constructing “interactive” innovation and entrepreneurship practice system, and achieving organic integration of education through practice and coordinated education
- E.** Improving the professional innovation and entrepreneurship service level. Through the research laboratories, equipment and technical conditions of the Institute’s training center, provide special support for college students’ innovation and entrepreneurship, solve technical problems during the process of innovation and entrepreneurship, enhance the students’ mastering of innovation and entrepreneurship knowledge, and promote the students’ innovation and entrepreneurship ability.

### NEXT STEPS

As Vice-Chairman of the Unit of the National College Alliance of Innovation and Entrepreneurship and Chairman and Secretary General of the Unit of the National Higher Vocational College Alliance of Innovation and Entrepreneurship, NIIT is aiming at “strengthening inter-college and college-enterprise cooperation, exploring the concept, method and institutional mechanism of innovation and entrepreneurship education together, making solid progress in diverse and multi-level innovation and entrepreneurship education cooperation among national vocational colleges, realizing resource sharing, coordinated development and mutual improvement, and building the Alliance into a learning and communication platform, policy service platform, skills upgrading platform, college-enterprise docking platform and talents gathering platform for innovation and entrepreneurship education of national higher vocational colleges”, under the guidance of the Ministry of Education, cultivate high-quality, innovative, entrepreneurial technical and skilled talents for the reform and development of national innovation and entrepreneurship education, and for the transition and upgrading from “Made in China” to “Created in China”, and serve the strategies of building an innovative country and strengthening the country through talents..

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# ENTREPRENEURSHIP

## SILVER: OLDS COLLEGE CANADA

### INTRODUCTION

For over a century Olds College has placed an emphasis on hands-on training, applied research and innovative learning, but at the heart of everything we do is focus on fostering a spirit of entrepreneurship and a commitment to helping our students employ their passion. At Olds College entrepreneurship isn't just a word or a course, it's a mindset and a cultural value.

When we refer to entrepreneurship, we mean it in the broadest sense: the ability to see an opportunity and pull together the resources and people needed to make it happen. Entrepreneurship is embedded in our operational model, our learning environment, our ventures, our partnerships, our social activity and our international projects. We take pride in being a leader in innovation and entrepreneurship.

### AWARD WINNING INSTITUTION

At Olds College, entrepreneurship is integrated across the campus using four main pillars: Training, Business Support, Learning Enterprises and Entrepreneurial Partnerships.

### ENTREPRENEURSHIP TRAINING

At Olds College all students who intend to graduate must complete Spirit of Entrepreneurship – a gamified entrepreneurship iPad app. Spirit of Entrepreneurship is the first comprehensive course delivered as a gamified business simulation iPad app. Students learn to start and run their own lemonade stand empire in a social and mobile environment. Mini-games and awards encourage students to move through 12 modules of content created to teach them how to apply entrepreneurial concepts, assess their business environment, make financial decisions and apply marketing strategies to effectively increase profitability.

Olds College second year business diploma students have the opportunity to work with small businesses to solve real-world problems in lieu of traditional classroom learning. Similarly, our Turf and Horticulture programs have moved to an industry integrated program where students spend blocked amounts of time working in the industry.

Olds College also offers a new online certificate in Entrepreneurship and Social Enterprise with eCampus Alberta.



### ENTREPRENEURSHIP BUSINESS SUPPORT

Starting your own business requires planning, heart and access to resources to make your vision come to life. Olds College provides students with access to assistance with business planning, business plan competitions, membership in our Entrepreneurship club and access to the Central Alberta Regional Innovation Network (RIN), a network designed to provide support to business growth by providing access to commercialization expertise such as advisory services, technology and concept development, industry and academic funding programs, market and customer development, and financing and investment attraction.

Olds College Centre for Innovation provides students access to the ATREK business incubator, a fund created to give students and small business the opportunity to explore and evaluate new business ideas by awarding new entrepreneurs grants up to \$5,000 for access to Olds College expertise, facilities and equipment.

Our new partnership with District Ventures Business Accelerator provides support to entrepreneurs in the consumer-packaged goods industry, with a focus on the food and beverage, and health and wellness sectors.

Olds College in partnership with Western Economic Diversification and Alberta Garment Manufacturing Ltd. created the Apparel Innovation Centre, an open-access apparel research and development facility that gives entrepreneurs access to product testing, equipment development and research.

### LEARNING ENTERPRISES

We value providing our students with hands-on experience in business. Our BrewMaster and Brewery Operations Diploma and our Meat Processing Certificate programs operate successful retail enterprises on campus, giving students experience in running a business.

### ENTREPRENEURIAL PARTNERSHIPS

Whenever possible, Olds College looks to form partnerships. Our partnership with the Pomeroy Inn and Suites, allows our Hospitality and Tourism Programs direct experience with the industry that will employ our graduates.

A joint venture between Olds College and the Chinook's Edge School Division led to the creation of the Community Learning Centre (CLC), a one of a kind facility that includes Olds College Athletic facilities, Olds High School, a Performing Arts Centre and community space.

Our student housing is fully financed from the private sector in a DBFO approach. College Housing (Olds) Co. was responsible for the design, construction, financing, operation and management of the "Olds College Centennial Village," our newest on-campus residences.

### RESULTS AND ACCOMPLISHMENTS

Olds College graduates demonstrate an entrepreneurial approach to business, as a result our grads are in high demand and have a 96 percent employment rate in their field of study. Students from the Olds College BrewMaster program received the TEC VenturePrize Student award competition for two consecutive years for their business plans relating to their business ventures: Ceres Solutions Ltd and Alberta Craft Malting.

Olds College was recognized as an "Apple Distinguished School" in 2015 for offering programs that meet criteria for innovation, leadership, educational excellence and demonstrate Apple's vision of exemplary learning environments. The College also received the Colleges and Institutes Canada Entrepreneurship Award in 2015 for using the Spirit of Entrepreneurship app to foster an entrepreneurial mindset among students.

The success of our Spirit of Entrepreneurship app, also resulted in our Vice President of Academic and Research delivering the opening keynote address at the 2014 Advancing Learning Conference. He was also nominated for a Manning Innovation Award for his work in gamified entrepreneurship.

Olds College was awarded the 2014 Gold Award of Excellence by the World Federation of Colleges and Polytechnics for our approach to shared leadership in an entrepreneurial culture.

### INTERNATIONAL VALUE

Our entrepreneurial focus has led Olds College to several international partnerships. In 2012, Olds College developed a social enterprise, importing coffee from rural Dominican Republic, roasting it in Calgary and selling it online, through local Co-op Stores in Central Alberta and at various coffee shops. Eight thousand pounds of coffee beans were imported and sales totaled almost \$65,000. Profits went back to the Dominican Republic to support education and training. Olds College students were given an invaluable opportunity to visit the Dominican Republic farmers and gain a complete understanding of the international coffee value chain.

Olds College is currently working with a small technical college in Rioja, Peru to revise the curriculum for their Food Processing diploma. We are also working with a small technical college in Portachuelo, Bolivia to revise the curriculum for their Agriculture Technician diploma. Both are two year projects, funded through Colleges and Institutes Canada.

### WORDS OF WISDOM

Entrepreneurship is much more than a word or a course offered as part of a business program, it's a mindset and a cultural value. To create a culture of innovation and instill an entrepreneurial spirit, you need to embed entrepreneurship in everything you do. From your operational model and learning environment, to future ventures and partnerships; you need to watch for opportunities and when you find them be able to pull together the resources and people needed to make it happen.

A key lesson that we learned is the importance of understanding the needs of our students. Born into the digital generation, they want to consume information on the go. By launching our Connect Your Passion initiative, we increased bandwidth and WiFi access across campus, developed a fully integrated mobile learning strategy and developed our gamified entrepreneurship course, our Spirit of Entrepreneurship iPad App.

### NEXT STEPS

To ensure sustainability Olds College is committed to future proofing and entrepreneurship. Ancillary revenue make up a significant portion of our budget. Campus enterprises like our retail meat and brewery stores have increased our total revenue by 50 percent over the past five years.

We will continue to focus on developing future collaborations, such as the high efficiency GREENhouse Enterprise initiative with Sunterra Farms. The GREENhouse will produce six million kilograms of locally grown tomatoes, strawberries and lettuce each year, and play a key role in research and development of greenhouse technologies, horticulture practices and energy efficiency.

In addition to new partnerships, we will continue to embody entrepreneurship in everything we do; providing our students with an entrepreneurial mindset and attitude that will serve them well, whether they go on to be an employee or start their own business.

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# ENTREPRENEURSHIP

## BRONZE: LAMBTON COLLEGE

### ENACTUS (STRENGTH IN NUMBERS, PROJECT ONE SEED, THE CUBE/ CUBE IT/ CUBESTEP)

## CANADA

### INTRODUCTION

Enactus Lambton College works to develop young entrepreneurial leaders who are passionate about advancing the economic, social and environmental health of Canada, and to a greater extent the world. We believe investing in students who take Entrepreneurial Action for others, creates a better world for us all.

Each year, student teams from the more than 60 colleges and universities across Canada compete in both regional and national competitions sharing their extraordinary projects. This past year, Enactus Canada has impacted over 32,000 lives, and Enactus Lambton College has impacted approximately 24,000 lives alone.

### AWARD WINNING PROJECT

One of Enactus Lambton College's most successful projects to date is the One Seed Project. This project started in 2012, when one of Lambton College's own students decided he wanted to bring solar energy to his village in Zambia. After spending three weeks in the village, and listening to the needs and wants of the community, Enactus Lambton College identified several key areas of need including food security, access to clean drinking water, education, health care, entrepreneurship and business development, and renewable technology. Initially, the project focused on increasing food security, and since 2012, have lifted over 32,000 Zambians out of poverty across 45 rural communities in the Monze District of Zambia.

The key to the success of the One Seed program has been the transfer of knowledge through the project's "train the trainers" program. By partnering with South West AG (a local agricultural co-op) the project was able to provide Zambian farmers with the knowledge and techniques needed for a successful no-till farming revolution. In total, the project has now trained over 100 trainers who have in turn trained over 3,000 Zambian farmers. Farmers that have gone through the training program are seeing crop yields improve by five times or more compared to their previous yields. Families that were living on less than a \$1 a day are now earning in excess of \$4,000

a year. This increase in income has created a middle class in rural Zambia. Farmers are now able to purchase goods and services, and more importantly, can now send their children to school. The One Seed Project has empowered people to realize their vision and goals for their community's growth.

With a dramatic increase in income, communities are now building new schools and housing for teachers – this work has led to six new teachers being hired in two schools. Recently, at the school in the village of Gaali, a solar pump and drip irrigation system was installed to not only provide clean drinking water but also enable the community to grow a variety of fruits and vegetables, which is now providing much needed diversity in the students' diet. This school in Gaali, which previously ranked dead last in the educational rankings for the Monze district, was recognized as the top school in its district and has experienced an increase in enrollment by over 400 students.

Finally, during Enactus Lambton's initial needs assessment in 2012, the team learned that life expectancy in rural Zambia is 37 years of age. The community of Gaali desperately needed a health clinic, so they could provide immediate medical care to thousands of people, while eliminating a 25km walk to the nearest clinic. Construction on a new clinic, in partnership with the community, is currently underway and should be completed later this year.

### RESULTS AND ACCOMPLISHMENTS

Above all else, Enactus Lambton is a group of individuals driven to help others while making the world a better place to live. In four short years, they have helped to create a farming revolution and middle class in rural Zambia.

In 2015, the effects of El Nino created severe drought across Africa. Farmers not trained through the One Seed program saw their crops die. It was the One Seed farmers who banded together and decided rather than selling their crops to the government for profit, they opted to help feed their neighbors, saving countless lives in the process.

Since its inception, over 4,000 hectares of crops have been planted by over 4000 farmers trained in no-till farming through the One Seed Project and more than 100 jobs have been created. School enrolment has increased by more than 60 per cent and a new health clinic is nearing completion.

Some environmental benefits include over 5000 tonnes of carbon have been kept in the ground through the introduction of farmers trained in "no-till farming" practices and the elimination of over 16,000 tonnes of CO2 emissions.

The Lambton College students responsible for leading this project have gained unparalleled experience in building world-changing projects. In many ways, there is no other co-op experience or job experience that could have provided the practical experience these students have gained by participating in Enactus Lambton College.

### INTERNATIONAL VALUE

The program has already experienced significant growth and expansion into nearby communities. Zambian farmers trained to be One Seed trainers are transferring their knowledge to others. In 2012, project One Seed saw roughly 100 Zambian farmers trained. In 2013, another 240 were trained. In 2014, a little more than 700 Zambian farmers were trained. At that point, the team realized the current method of training Zambian farmers was not sustainable, which led to the development of the train-the-trainers model. In 2015, the focus shifted to transferring knowledge to Zambian trainers rather than directly training farmers, thus allowing the newly trained Zambian trainers to educate and train other Zambian farmers. The result was a reduced number of visits to Zambia over the next year, knowing that the new training model was in effect. In 2015, Zambian trainers trained over 4000 Zambian farmers, proving that the team had managed to develop a sustainable model for international professional education.

### WORDS OF WISDOM

Too often organizations go into developing countries and poverty-stricken regions and attempt to direct, impose change, or give aid. The problem with this process is that most communities are given solutions to problems that they didn't ask for solutions to, or haven't been properly trained to carry out. During their time in Zambia, the Enactus Lambton team has seen cars donated to neighboring communities, to be used as transportation,



that end up being stripped for parts and used as storage shelters. Enactus Lambton firmly believes that education and the power of knowledge is the key to ensuring self-sustainable progress. If the team had just donated funds to the Zambian farmers to purchase farming inputs, it's unlikely farming practices would have changed. Likewise, if the team had planted crops for them, they would not have known how to properly replicate that success when team left. By transferring knowledge of sustainable agricultural practices, Enactus Lambton was able to ensure the Zambian farmers were empowered to achieve their own goals, dreams, and desires.

### NEXT STEPS

Our next steps are to utilize the train the trainer models in other regions of the world and in other disciplines. Another project we have underway, called Strength in Numbers, focuses on teaching financial literacy and the team has realized that, much like One Seed, to truly grow a project exponentially, they must determine the best way to transfer the knowledge to others. Enactus Lambton believes the success of the One Seed Project can be replicated anywhere, across any discipline, by anyone. Educating others on this process is paramount to the future goals and ambitions of Enactus Lambton College.

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**GREEN  
COLLEGES**

# GREEN COLLEGES

## GOLD: DURHAM COLLEGE CENTRE FOR FOOD CANADA

### INTRODUCTION

Durham College is home to approximately 30,000 students, almost 12,000 of whom are in full-time, post-secondary and apprenticeship studies. With over 73,000 graduates, we have a direct impact on every industry and sector in our home community of Durham Region, which neighbours Toronto, Ontario. Our amazing Centre for Food is where community, local agriculture and learning come together through a field-to-fork vision that is at the heart of everything we do. The 36,000 square-foot facility is home to students studying in culinary, hospitality, event management, food science, agricultural and horticultural programs, completing the full cycle of farming, from the preparation, to serving and celebration of food. The CFF houses Bistro '67, a full-service, green-certified restaurant, where staff and students create and serve flavourful dishes inspired by fresh ingredients from our own gardens and local suppliers. It is also home to Pantry, a retail store featuring food prepared by culinary students.

### AWARD WINNING PROJECT

Durham College is located in a unique region that features a mix of urban and rural living, with agriculture as one of the leading employers. Through a market analysis and in working with industry, a series of factors came to light that ultimately made the Centre for Food a reality:

- We learned that each year hundreds of students were leaving our community to pursue tourism, hospitality, culinary, agriculture, horticulture and other related programming at other post-secondary institutes.
- We understood that projections were pointing to employment growth in these sectors in our community.
- There was growing demand for local foods produced using environmentally sustainable practices.

Recognizing this opportunity to address economic, social and sustainability issues, the college embarked on an ambitious plan to satisfy this significant gap in an innovative and environmentally conscious way through the creation of the Centre for Food. This centre is made up of a 36,000 sq. foot building that is home to a green-certified restaurant, retail store, living wall and numerous

classrooms and labs. In addition, the centre includes greenhouses, a hoop house, agricultural fields, growth chambers and other complimentary features. The centre is supported by ambassador and celebrity chef Jamie Kennedy, who has dedicated his incredible career to sustainable agriculture and advocacy of the local food movement.

The Centre for Food is designed to train a new generation of skilled professionals and inspire health and well-being in the community through its field-to-fork vision. The vision is more than a saying – it is a philosophy that is lived every day with an intended focus on local production, harvesting, storage, processing, packaging, sale and consumption of food for local consumers. It also operates under a zero-waste mandate.



Because the centre is built on reclaimed land surrounding the college's existing campus, it has had an immediate impact on the scope and health of its ecosystem. However, this also created some challenges as the land was heavy with clay and not immediately conducive to planting crops. About 45 centimetres of topsoil and compost, derived from local spent mushroom substrate was added to rehabilitate the garden site, which had been environmentally disturbed by construction activities. The compost-enriched topsoil has enhanced water holding capacity and nutrient availability of the garden soil.

The college also faced financial hurdles in making the project a reality as the federal and provincial governments were not able to support it with a grant due to their own financial circumstances. However, the college developed an alternative funding model for the \$24 million in funding required because it recognized the importance the project held for students and its community. The centre opened to students in September 2013.

Throughout the entire process, the College consulted with industry partners on the development of the Centre, its program and lands. The same remains true today as the college looks at expansion of the vision with complementary programs and uses.

## RESULTS AND ACCOMPLISHMENTS

The CFF is DC's innovative response to the demands of the local culinary, hospitality, tourism, agriculture, food science and horticultural sectors. Its sustainable building, surrounding grounds and graduates serve as a beacon for innovative environmentally sustainable projects. In addition, there are hundreds of students studying in nine post-secondary programs that are all tied to the field-to-fork vision.

As part of the college's commitment to sustainability, the CFF was designed and built following the principles of Leadership in Energy and Environmental Design (LEED), an internationally accepted benchmark for the design and operation of high-performance green buildings. In 2016, the Green Restaurant Association (GRA) recognized the CFF's efforts by naming it a 3 Star Certified Green facility. The rating applies to a total of nine CFF spaces, including Bistro '67, Pantry, large quantities, culinary and culinary baking kitchens; wine-tasting/mixology lab; food distribution area; lecture demonstration theatre; and banquet hall.

The centre, or various features within it, has achieved a number of industry awards and designations in addition to the GRA honour, including most recently by the Ontario Culinary Tourism Alliance. The Alliance awarded Bistro '67 with a 'Feast ON' designation for using more than 25 per cent local food and beverages.

The CFF is raising awareness around the importance of preserving local farmlands; addressing the need for sustainable techniques and technologies to grow food in urban environments; and satisfying a desire for local food with its associated lower energy consumption and reduced environmental impact.

## INTERNATIONAL VALUE

Through the development of sustainable techniques and technologies to grow food in urban environments as well as strategic partnerships with Institutions such as Centro Experimental de Formacion Profesional (CEFOP) in Peru, the CFF has been able to make a positive impact by sharing this knowledge and expertise and supporting learning objectives cross-culturally.

When applying DC best practices internationally, significant time is spent understanding the local context and institutional realities. DC is adept at working alongside international partners to identify creative approaches to integrating environmentally progressive programming that best suits a partner's educational requirements.

Such activities have incredible benefits for DC programming, as DC can critically reflect and learn from the solution-oriented approach to environmental sustainability that emerges from

these international relationships. Through consultation with local stakeholders and industry, access to land that can be reclaimed, and the establishment of formal partnerships, DC's best practices are transferable across any border.

## WORDS OF WISDOM

As educators, we must set an example for our students and community through efforts that empower others and provide the tools needed to improve the world. DC's commitment to a greener campus begins with an investment in people, processes and infrastructure. This is enhanced by embedding our beliefs and practices into our curriculum. All efforts are driven by leadership, passion and support, which allows adopters to motivate and engage the larger community.

Our experience at DC started small, but with persistence of vision and investment in people and infrastructure, our movement has taken form and created a lasting impact. We are making a difference by graduating a new type of student – a graduate who understands and lives a greener life, in and outside of their personal and professional lives. As a leading post-secondary institution we understand that we must pave the way for others. We believe in 'Living Green.'

## NEXT STEPS

Sustainability will remain at the heart of all actions taken by the CFF. This includes establishing a core research priority in the college's Strategic Research Plan for the advancement of agriculture, agri-business and tourism.

The college is also developing plans for a Centre for Food Science that will have the ability to conduct a wide range of food science-related activities and research in a significant and purposeful way that will complement post-secondary programs related to CFF and others. It will directly support the growth and development of a local food industry in the areas of food manufacturing, composition, additives, stability, safety and sensory.

Finally, development of the CFF grounds continues. Planning for a two-acre arboretum is underway, where students will plant more than 200 species of trees, shrubs, perennials, and fruit-bearing plants to provide a teaching and learning environment for students, the local agri-food industry, community organizations and public.

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# GREEN COLLEGES

## SILVER: CÉGEP LIMOILOU

### RESPONSIBLE ACTIONS FOR THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT COMMITTEE CANADA

#### INTRODUCTION

In the province of Quebec, the *Cégep Limoilou* is one of the three french-speaking public colleges of the magnificent Quebec City, which overhangs the Saint Lawrence River, the east front door of Canada. It is, specifically, based in the district *Cité-Limoilou* with its walls steeped with history, the wealth of its urban landscape, the closeness to the Saint Charles River establishes an exceptional living environment with attractions shining well beyond the country. Evolving in an urban neighborhood, the *Cégep Limoilou* has well-integrated sustainable development values that daily affect its 7 300 change contributors. Beyond a sane environmental management, the educational mission of *Cégep Limoilou* causes it to contribute to the training of citizens of the world, informed and responsible regarding environment and sustainable development for almost 12 years.

#### AWARD WINNING PROJECT

Pressures by biology students in 2004 and the involvement of some professors, led to the creation, in 2005, of the *Comité d'action et de concertation en environnement (CACE)* or *Environmental Action and Consultation Committee* of the *Cégep Limoilou*. The coherent implementation of the College environmental aim necessitated an important amount of coordination work. On February 21<sup>st</sup>. 2006, the Board of Directors adopted and established an environmental policy for the institution, a recovery system of waste carried out in the same year, an environmental action plan, for each year since then and an environmental policy amended on November 30, 2010.

Directly and concretely in the institution the CACE and the student committee work together. They offer students, employees and professors the opportunity to get involved as volunteers and participate in various projects such as debates, awareness, theme weeks, conferences and action plan. With a great care for environmental issues, all these persons are dynamic, bright and mobilized.

With the help and support of various services and committees such as the Service of animation of sociocultural activities, the Service of community action



and spiritual life *Bend Health* and the college's student committee ambitious action plan takes form every year. Accompanied by organizations stemming from their environment, as *Quebec'ERE*, their consultant in education with regards to the environment, the City of Quebec, the *CRE-Capitale nationale*, *Vivre en Ville et Accès Transport Viable*, diverse axis of intervention, in particular the arrangement of the internal spaces and the green spaces, the management of the water, the air quality, the management of the residual materials and raising environmental awareness are being developed over the years.

The "*Environnement*" awards recognize their outstanding commitment to a cause or an environmental project. Initiators of movements, for instance *Au Cégep AVEC ma tasse!*, creators of sustainable projects, as its green terraces, or bearers of new approaches, such as its food waste recycling spots, the people involved at the College clearly demonstrate dynamism and effervescence on environmental education of the institution.

#### RESULTS AND ACCOMPLISHMENTS

In all of the interventions of the students, teachers, programmes and staff, the *Cégep Limoilou* is, itself, an environmentally responsible institution. It has made the protection of the environment a core value of its strategic development plan.

The involvement resulted, this year, in activities that the *Cégep Limoilou* is proud of: *Le grand TROC*, a barter for students, employees and professors, recipient of the *Défi sans auto solo*, a challenge thrown to the Quebec population to recommend carpooling or public transportation, different activities and formations to educate on diverse subjects, such as a debate on climate

issues or a conference of the greening of urban areas. Also, the student environmental committee deposited a dissertation to the PMGMR of the Quebec Metropolitan Community, a project to effectively manage waste and awareness materials management residual. Recently, bees were installed on the roof, a unique initiative in the colleges in Quebec City.

All this work is still rewarded each year with the renewal of the certification *Établissement Vert Brundtland* as far back as 2005, an accreditation *Cégep Vert du Québec d'ENVironnement JEUnesse* since June 2009 and the accreditation from *RECYC-QUÉBEC* for recognition of a level 2 of the *ICI ON RECYCLE!* program since 2010.

### INTERNATIONAL VALUE

In all of its implications, the *Cégep Limoilou* shows a positive leadership amongst the colleges of the province. It allows to live international experiences with its three student mobility programs. The *Projets Monde* are group stays of several weeks overseas, *Alternance travail-études Monde*, stays of 8 to 13 weeks abroad, allowing the acquisition of experience and the improvement of a language and the *DEC Monde* grant international study sessions of 15 weeks, fully credited. The International Bureau of the College is responsible for recruiting and welcoming foreign students, who bring a great diversity in the College community. The actions of the *Cégep Limoilou* lead it to promote an environmental awareness to local and immigrant students, apprising the next generation. Our practices are transferable and applicable elsewhere. The College is really open to any form of collaboration at the international.

### WORDS OF WISDOM

In all its interventions, the *Cégep Limoilou* positions as an ecoresponsible institution. It has made environmental protection a fundamental value of its strategic plan of development and it is probably the key of its actions. In Quebec, the *Cégep Limoilou* is at the heart of the life of a very urban district. What does not prevent it from being a resolutely "green" establishment! The environmental work of the *Cégep Limoilou* demonstrates concretely and daily that it is possible to do otherwise! Quietly but certainly, one gesture at a time!

### NEXT STEPS

Imagination and stability for the *Cégep Limoilou*! After more than 12 hard-working years, the College has now to assure the stability of the set of its actions in sustainable development, to pursue its work of precursor in the province of Québec. It wishes to open even more the community of its district *Cité-Limoilou*. It wishes to create new partnerships, even to an international level and to more imaginative in the solutions than it will realize to support a development always more sustainable.

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# GREEN COLLEGES

## BRONZE: GUIDAOJIAOTONG POLYTECHNIC INSTITUTE (GPI) TRAINING BASE OF NEW ENERGY TECHNOLOGIES CHINA

### INTRODUCTION

Founded in 1950, Guidaojiaotong Polytechnic Institute (GPI) is a vocational college, serving the rail transit industry and manufacturing industry.

GPI is located in Shenyang, Economic & Technological Development Area. The Campus covers an area of 342,000 square meters, the construction of which highlights the concept of “vocationalization, intelligence, information and humanization”.

The institute has 27 majors established, including Railway Engineering Department, Mechanical Engineering Department and so on. The institute also initiated the Double Closed Loop Control System to ensure the quality of education.

The training base adopted the model of Secondary Development to possess the independent intellectual property, which solves the misconnection between the teaching and application.

GPI has always insisted on a student-centered concept. Since the establishment of GPI over 66 years ago, the institute has cultivated over 80,000 skilled talents for state railway enterprises and local rail transit industry.

### AWARD WINNING PROJECT

Guidaojiaotong Polytechnic Institute (GPI) is one of the first higher vocational colleges to carry out the concept of green college and sponge city in China. In general, the building of the training base in new energy technologies looks like a leaf, representing green, energy-saving, low carbon and environmental protection.

Based on the principle of fluid mechanics, the building of the training base can breathe automatically without using energy, which is a unique feature of GPI's training base among vocational schools in China. No energy & ventilation facilities are used in the construction, natural ventilation can be achieved in the building.

Also, for energy-saving, a wind and solar hybrid power generation system is used in the training base of new energy technologies, which provides power to the electrical devices in the training room such as computers, lighting equipment and controllers.

For water-saving, the rainwater collection system and electric valves are used in the campus. Rainwater can be reused for irrigation, as well as view spots in the school campus.

High-end PLC S7-1500 of Siemens is used as a controller for temperature and humidity control, which could provide the most advancing technologies and skill to the students.

Renewable materials are used as much as possible in the practical training base for environmental protection and cost-saving.

The unique feature of GPI's green college construction lies in: the green buildings in the campus are not only used as green training base for vocational education under the mode of work-study combination, but also behaves as complicated object for mechanical and electrical integration related majors and solve the problems caused by lack of control object or oversimplified control object.

### RESULTS AND ACCOMPLISHMENTS

GPI intends to carry out the concept of green college in the higher vocational colleges of China, and succeeds in providing the green technologies, skills, and green conception to the students, including energy-saving, low carbon and environmental protection consciousness. Benefits to the training base of new technologies lie in:

- 1) Improve the green campus environment as well as the environment consciousness: The green college construction is an effective way to strengthen the students' environment consciousness and will greatly stimulate students to take part in various environmental protection activities.
- 2) Green skill improvement: Wind and solar relevant skills can be directly introduced to the students, by which the students can learn how to design, use and maintain the devices in the power generation and management system.
- 3) Electromechanical skill improvement: Green buildings can be used as both training base and control object, so the students' skill can be greatly improved in this mode.

### INTERNATIONAL VALUE

GPI combines the concept of green college with campus culture, environmental sustainability, and green skill improvement. The green buildings provide primary requirements for green skill training, as well as an ingenious solution to solve the problems caused by lack of control object or oversimplified control object. In this mode, GPI has made a great contribution to the vocational education in the following aspects:

- 1) Implement the modern vocational education idea by combining teaching, learning and training together, by which the students' green skill can be greatly improved.
- 2) Promote secondary development mode for training base construction, and make sustainable utilization of resources. In this mode, the comprehensive practical ability of the teachers can be improved, as well as that of the students. So, this mode is worth spreading all around the world.
- 3) Environment consciousness improvement by constructing green college.

### WORDS OF WISDOM

- 1) For the training base construction: the model of Secondary Development for training base construction is worth learning and spreading to other individuals, institutions, and associations all over the world, which could solve the misconnection between the teaching and application.
- 2) 2) For green college construction: With increased awareness of quality education in higher vocational schools, green concept and green value system also became important content of vocational education along with emphasis on acquirement of green skills and technologies.



### NEXT STEPS

GPI has always been concerned about green college construction, green skill improvement and training base construction. After accumulation of experience in the long-term vocational education, GPI will continue trying to combine green college construction and green skill improvement together. Furthermore, ensuring green consciousness has taken root in GPI is always the pursuit of the goal. Therefore, more and more students, as well as teachers will participate in the training base construction, which will greatly improve the students' innovative spirit, practical ability and green consciousness.

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**HIGHER  
TECHNICAL  
SKILLS**

# HIGHER TECHNICAL SKILLS

## GOLD: BURTON AND SOUTH DERBYSHIRE COLLEGE DELIVERING GLOBAL HIGHER TECHNICAL SKILLS FOR TOMORROW'S PRODUCTIVE ECONOMIES UNITED KINGDOM

### INTRODUCTION

Burton and South Derbyshire College is a leading UK Further Education institution based at the heart of the UK. Serving 8,000 learners per annum we are passionate about ensuring that we are driving economic development and regeneration through raising the productivity of the current and future workforce. With over 400 employees, 600 active and engaged employers and strong employment destinations of our learners we are strategically positioned and aligned to support the local economy and infrastructure through high quality skills development tailored to industry need. Our international footprint spans territories including; China, Japan, South Korea and India and the United States. We are part of consortia of three UK College's operating the highly successful Jeddah Female College of Excellence and we are proud of the way that these global relationships are supporting and nurturing the growth in technical and employability skills of all of our learners.

### AWARD WINNING INSTITUTION

Burton and South Derbyshire College places a strategic emphasis on partnering with industry to ensure that all of our learners have access to jobs through the acquisition of 21<sup>st</sup> century technical and soft skills. Through our 'skills promise' (which has been designed by industry for industry) and our curriculum excellence we have created provision that specifically gives all of our learners' core competences in their chosen field and secures incredibly high rates of sustained employment for our learners.

Each year BSDC works with many blue chip and significant organisations. These include;



We are strategic education partner with St George's Park (the Football Association's internationally renowned centre of excellence) providing a range of training, skills development and Apprenticeships. We have established sector based academies with a range of retail partners including international supermarket chain Waitrose. These programmes support the opening of new stores in aligning, through training, local skills needs with roles identified within the new retail outlet. We have established a market leading sign and digital print facility that is supported by industry and the Local Enterprise Partnership providing our learners with the skills needed to excel in this sector.

The college holds regular and vastly attended events to support employers in developing the skill base of their employees. Our monthly 'business breakfasts' allow employers to share best practice in skills development and provide a focal point for new employers wishing to take advantage of the college's expertise. Our annual employment fairs have also seen hundreds of employers attend offering thousands of jobs significantly reducing unemployment locally and providing the economic regeneration and development required for a sustainable and successful local community.

Our range of industry Patrons and Fellows are aligned to curriculum areas ensuring that our curriculum is fit for purpose and reflects industry need. These executives and industry innovators provide opportunities for our learners including industrial talks, industry visits and job opportunities at the end of their programmes of study.

### RESULTS AND ACCOMPLISHMENTS

The impact of our work with employers has significant benefits to our students. Our impressive actual sustained destinations are 87% with all of our learners earning at least the sector average salary or higher. Unemployment has reduced significantly and the college works with local authority inward investment teams to secure new job opportunities for our students.

We work specifically on-site with a number of employers. Our Apprenticeship Development Centre has seen significant Government acclaim as it provides a unique example of strategic partnership working with a global brand that secures high level skill development that has a tangible financial impact on their business (reduction in the cost of making a car of £8 per unit).

Our Skills Promise is a mix of twelve 'soft' characteristics that employers tell us a vital for their workforce. Our promise to all of our students is that they will develop these skills, in line with their career aspirations and the expectations of their industry, whilst achieving their

technical / vocational qualification. This promise has been mapped against our curriculum so that it is embedded within learning and provides our learners with the added soft skills employers need (and a professional vocabulary to promote these) as well as their core programme of study impacting their employment prospects significantly.

### INTERNATIONAL VALUE

Our international work enhances this innovative approach through linking with countries that understand the importance of these skills. We are part of a consortium that operates a 600 place female College in Jeddah, Saudi Arabia. This college is providing young women access to vocational skills training that substantially enhance their employment prospects.

Our work in South Korea has seen hundreds of university level students study employability and English language courses in the UK that are aligned to their core domestic study and that add to their global understanding by giving them sector insights of UK operations. We have also held a number of UK and 'in country' delegations promoting the UK vocational system and supporting the development of similar institutions throughout South Korea. Throughout the summer vacation BSDC learners also travel to institutions in Korea to act as English language buddies providing help, support and guidance to Korean learners undertaking English language study. This programme has been incredibly well received by our learners giving them an unrivaled practical experience of another country and culture expanding their world view.

Our internationally celebrated work with Toyota Manufacturing UK has developed to an acclaimed relationship with Toyota City in Japan with regular student exchanges that provide industrial insight and the sharing of cultures between respective learners.

Our work in India includes train the trainer programmes in high level skills within the Healthcare and Construction industries and celebrated strategic alliances with community colleges across India supporting improvements in their work around teaching and learning, quality assurance and work with employers.

Leaders of the College have also given well received talks at global educational summits such as the WFCP conference in Beijing. These talks included our work in Apprenticeships, Employer Engagement and UK/China Skills Collaboration. Our strategic alliance with Beijing Railway Electrification College has also brought many benefits. We have created a unique and contextualised Apprenticeship framework for the College that will allow their learners to access jobs more quickly and so that they can apply their learning within the specific context of their role and the railway sector.

### WORDS OF WISDOM

In recent years, fuelled by the global banking crisis, the UK economy has seen recession and significant cuts in public sector funding. This has made engaging with employers difficult as they have been laying-off staff and the College has had to respond to its own cuts in recurrent funding. We have responded to this positively in supporting employers to understand how skills can improve productivity and competitiveness (and have grown our employer partnership work during these times), have helped secure inward investment into our local economy, we have diversified our income away from UK Government funding and into other areas such as full cost work with employers and work in international territories and have supported the unemployed back into work having a positive impact on the economic regeneration of our communities.

Our advice is therefore to keep focused on your core mission whilst adapting and remaining agile in responding to the macro environment and change within your industry. Without strong links to industry technical education is flawed and so bringing together your curriculum and your employer base into one unique global offering will give a competitive advantage in what you do and ensure that the technical skill outputs you are delivering are current, reflect industry best practice and, most of all, are highly sought after by employers.

### NEXT STEPS

We have recently launched our 'adaptive plan' which details our forward strategy to 2020. This strategic document has been renamed to reflect the ever changing demands of our environment and the agility required for continued success. We will continue to develop strategic links with employers to ensure that these benefit our learners and that we are up-skilling their workforce and helping them sustain a competitive advantage. Our work internationally is expanding at a rapid rate and we will continue with this focus seeking our domestic and in country opportunities that share best practice are mutually beneficial and that enhance the global reach of the learners who undertake programmes with us. Finally, We will continue to invest in our soft and hard infrastructure and the development of our employees ensuring that everything that we do reflects industry best practice.

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# HIGHER TECHNICAL SKILLS

## SILVER: HANDAN POLYTECHNIC COLLEGE TO INNOVATE THE COOPERATIVE MODE BETWEEN COLLEGE AND ENTERPRISE CHINA

### INTRODUCTION

The College takes the lead in promoting and drafting the Regulations on Promoting the School-Enterprise Cooperation for Handan Vocational Education in the whole province, which has become the effective local government regulations. It has established a strategic cooperation relationship with some of the Top 500 Enterprises, such as Xinxing Energy Equipment Co. Ltd. and the Great Wall Group, cultivating and conveying more than 700 students for them every year. Besides, it has set up the titled classes with some well-known enterprises like Sunshine Group, Mei Shi Lin Group, etc. And, it has piloted a new work-learning-combined cultivating mode of “Internship + home lessons + tutorship” with some enterprises, such as Tianjin Honor Sign Home and China Continent Insurance Company.

### AWARD WINNING INSTITUTION

Handan Polytechnic College has made remarkable achievements in majors and course construction. The College actively adapts to the industrial structure adjustment, the product optimization and upgrading, and the changes of demands for talents, and constantly adjusts and optimizes the major layout structure. Tightly focusing on six leading industries defined in the “13th Five-Year Plan” in Handan City, the College adjusted three departments and nine majors, achieving the hi-tech and applied majors accounting for more than 80% of offerings. Now, Handan has 2 national superior courses which have been upgraded to the national boutique resource sharing courses, and 11 provincial exquisite courses.

Handan Polytechnic College has made a great breakthrough in the training base construction. The College possesses a national architectural technology training base, and a decoration art design training base funded by state revenue, making it a national training base for software talents, nationally urgently-needed electronic information education talents and national cultural industry talents. At present, it has constructed 198 outside-school training bases, 61 on-campus laboratories, training rooms and practice bases.

Handan Polytechnic has integrally improved the teaching team’s level. The College has a national teaching team, 2 provincial teaching teams, and 2 provincial distinguished teachers; Handan has invested about RMB 2 million as training fund for training of 150 teachers. It has employed 35 senior engineers from the enterprises to be teachers and to participate in the entire process of formation of the personnel training program, curriculum reform, and students’ skills training and comprehensive performance evaluation.

Handan Polytechnic has obviously reinforced its social service ability. In 2015, relying on the provincial technical transfer center, the College reached 35 technology transaction projects, achieving a sum of technology transactions more than RMB 6 million. The school teachers have over 60 invention patents in total, and Handan has more than 200 technology research and development projects cooperating with the enterprises, creating economic profits of nearly RMB 100 million for the enterprises, and obtaining more than RMB 5 million through the technology transfer and technical service fee.

### RESULTS AND ACCOMPLISHMENTS

Handan Polytechnic has promoted the deep integration between vocational skills and professional spirits. The College offers career planning for students to enable them to clarify their vocational skill demands and employment directions when new students start school; organizes the second classroom on the transmission of professional spirits to promote the excellent traditional Chinese culture of morality-oriented, pursuing technology and attaching importance to inheritance; implements that the teachers tell the professional spirits, professional ethics, professional criterion in five minutes before starting a class to effectively cultivate the students’ professional spirit; organizes rich and colorful recreational and sports activities to completely promote the students’ physical and psychological health, and it has won the first prize twice in total team score of the second group of the provincial college students’ athletic games.

Handan’s students have made brilliant achievements in skill competitions. The College’s students have obtained 36 patents, and more than 200 first, second and third prizes in various national and provincial vocational skills competitions, including 3 first prizes and 3 second prizes in the “Faming Cup” innovation and entrepreneurship competition for college students among national higher vocational colleges. It won the best Wushu team award in the Taiwan Zhong Hua Cup Wushu Competition for Global Chinese, the second prize in national 3D digitalization innovation design competition, and a second prize in National College Mechanical Innovation Competition.



### INTERNATIONAL VALUE

The College has constructed a training base jointly with multiple parties. Having invested more than RMB 40 million in total, the College, jointly with the governments, industries and enterprises, have invested and constructed an experiment and training base, covering six leading industries, like advanced equipment manufacturing, modern logistics, food processing, information technology, etc. It has constructed the food processing and detection training bases with well-known food enterprises, a NC training base with the provincial lathe plant, a logistics training base with Wanhe Group, a key TD-LTE laboratory with DT Mobile, and a demonstrative incubator base for college students innovating undertaking with Congtai District People's Government. Exploring the school-running mode of the mixed ownership, the College has established a secondary automobile branch of mixed ownership with Wanhe Group by use of the institutional organization of the automobile branch of the College.

### WORDS OF WISDOM

Handan Polytechnic has effectively improved students' employment rate and employment quality. The College has set up a venture and employment fund for students. Its first employment rate of graduates of 2015 is 96%, and the year-end employment rate is 98%. The graduates mainly work in provinces, prefecture-level cities and provincial capitals, with their monthly income mainly ranging from RMB 3,500 to RMB 7,000. They are employed in a variety of fields and companies, including the Global Top 500 Enterprises or other domestic famous large-scale enterprises where 35% graduates are employed. The relevancy between the graduates' general work and their majors is 86%, among which the relevancy between the graduates of five majors, including architecture, electromechanical and food, and their work.

### NEXT STEPS

Handan Polytechnic College founded a Handan Modern Vocational Education Group with entity and support. In November 2015, the College took the lead in setting up the Handan Modern Vocational Education Group which is led by the government and consists of 63 members in total, including 24 middle and high vocational colleges, 25 commercial enterprises, 9 financial institutions and scientific research institutions and 5 industry associations. Now, the Group has more than 50,000 students and over 140,000 enterprise staff members. Based on the platform of eight professional committees, including equipment manufacturing, building construction, accounting and finance, automobile maintenance, food processing, electronic commerce, business logistics and information engineering, it aims to achieve the "four overall plans" of enrollment and employment, teaching resources, experiments and training and learning courses, to promote the "four innovations" of school-running model, training model, teaching model and evaluation model and to prompt the "three integrations" of industrial chain, occupational chain and teaching chain so as to establish a modern vocational education system with regional characteristics.

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*Electric vehicle charging station.*

proud to offer high-quality programs and extraordinary co-op experiences. We maintain strong, one-of-a-kind partnerships in the electricity sector that provide great benefit to students and employers alike.

Through a curriculum review process, recommendations were made in 2014 to implement changes to existing instructional materials and equipment to support the industry's human resources needs. The implementation plan included changes to existing electrical courses, the introduction of new courses, recommendations regarding delivery, access, and format, and other program properties. Learning outcome gaps were identified and then quickly eliminated through the incorporation of hard and soft technologies.

Other recommendations included additional types of training such as corporate training workshops and short courses for the existing workforce. Recognizing the demand for a robust electricity sector workforce Georgian, with support from its partners, opened the Centre for Sustainable Technologies (CFST) at the Barrie Campus. The CFST supports program expansion, and is a place where students and corporate trainees have access to state-of-the-art technology and learning resources, including electrical and robotic labs, geothermal rooms and testing areas. The fact that the CFST is a geothermal heated building provides the opportunity for students to experience first-hand how this green technology is used.

Activity within the CFST is focused on applied research to support innovation within the industry and the municipalities those utilities serve. One of Georgian's applied research projects includes the creation of a residential power system model for Hydro One. This is used to gather data to populate analysis software and investigate the nature of harmonics caused by residential energy-consuming devices, ranging from light bulbs to kitchen appliances and computing technology to electric vehicles (EV) chargers. This work was expanded through a published report by Pollution Probe on the impact of mass adoption of EV chargers on the electricity distribution system.

Faculty and students work with partners to identify and solve real-world problems through applied research projects such as analysis of the solar power-assisted electrical vehicle charging station at Georgian's Barrie Campus. Students also complete capstone technical projects, often drawn from co-operative education employment. Designed to lead unique, cutting-edge research about EV, the station is a collaboration between the college, PowerStream, Inc., one of Ontario's leading utility companies and Ford Motor Company of Canada.

# HIGHER TECHNICAL SKILLS

## BRONZE: GEORGIAN COLLEGE OF APPLIED ARTS AND TECHNOLOGY ELECTRICAL ENGINEERING TECHNICIAN AND TECHNOLOGY PROGRAMS CANADA

### INTRODUCTION

Georgian College's Electrical Engineering Technician and Technology programs attract approximately 200 Canadian and international students each year. Faculty use leading-edge technology and tools to complement theory. Students' skills are reinforced during mandatory year-round co-operative placements opportunities. Graduates are renowned for their skills in troubleshooting, maintenance and repair of electrical systems; installation and testing of electrical/electronic assemblies and sub-assemblies; designing and monitoring power distribution systems and assessing power quality; automation and robotics; CAD in engineering and maintenance settings; analyzing and improving processes; safe work practices; and applying engineering principles. To ensure high-quality and relevant curriculum, the programs are critically examined by the program team on a continuous basis and reviewed by internal curriculum committees as well as an industry-lead advisory committee. The technology program has been accredited by Technology Accreditation Canada (TAC). Industry training is often conducted at the college, which expands the skills of graduates while strengthening collaborative relationships.

### AWARD WINNING PROGRAM

Georgian College is a diverse and innovative educational institute. More than 1,100 international students from about 60 countries around the world join 9,000 Canadian students in over 125 programs. We are

Other formal partners include Hydro One, Toronto Hydro, KUKA Robotics and Direct Energy. Informal partnerships include such provincial, national, and global companies as Eaton.

### RESULTS AND ACCOMPLISHMENTS

At the foundation of Georgian's innovative approach to programming was a commitment to work directly with industry partners who were facing labour and skills shortages. Initially, when Hydro One announced they were entering a period of significant demographic change with more than 40 percent of their workforce eligible for retirement within five years, the focus was on assisting them with the looming skills shortage and aging workforce. To build their future employee pool and grow electrical programs and expertise, a comprehensive strategy was developed and implemented to meet the demand for additional technicians and technologists, and trade positions, and to train the existing Hydro One workforce. Later, that initial collaboration led to partnerships with other utility organizations. Georgian entered into similar partnerships with PowerStream and Toronto Hydro to address the electrical industry's need to attract future employees and provide training opportunities for their existing workforce.

Industry has benefitted from access to qualified applicants and to students with increased knowledge and skills. In addition to gaining well-paying jobs in the electrical industries students have graduated with a greater knowledge of specific jobs and the tasks. Faculty have benefitted from access to improved resources (images, texts, tools,

*Georgian Electrical Lab.*



*Electrical Engineer Tech.*

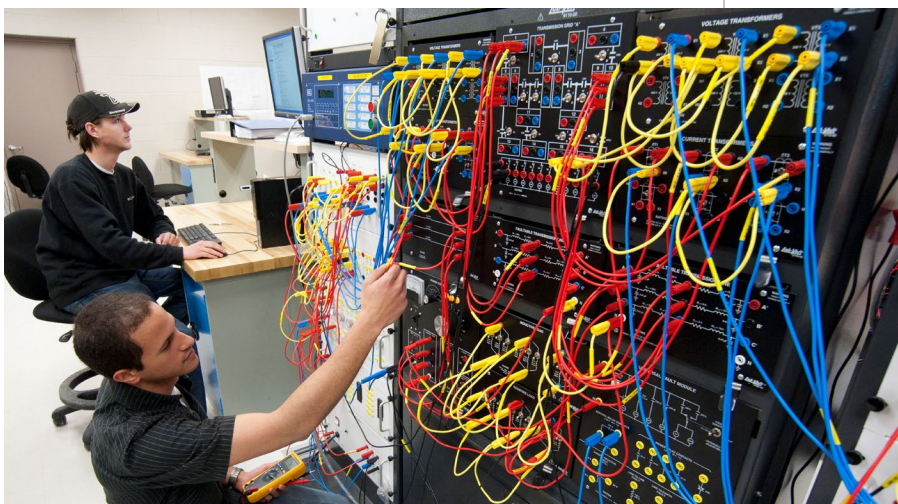
software and work processes) used by these companies as well as opportunities to visit sites, collaborate with employees at all levels. Additionally, faculty and students together have gained opportunities to engage in applied research opportunities previously not available to them.

### INTERNATIONAL VALUE

Georgian College has strong international ties. Since 2000, the college has operated a campus in Chandigarh, India through a partnership with the Continental Institute for International Studies (CIIS). That campus offers programs in computer studies, automotive marketing, and mechanical engineering technology. The college has also negotiated articulation agreements with institutions in many nations around the world, including China, Korea, Germany, Australia, Ireland, the United States

of America, South America, and others. Georgian's International Centre provides comprehensive support for international students: English for Academic Purposes courses, assistance with immigration issues and health insurance concerns, homestay arrangements, airport pickup and counselling support.

The skills gap analysis, learning outcome writing and curriculum design processes created to solve industry skills gaps are easily transferred to other programs and institutions.



### WORDS OF WISDOM

The most important approach to solving problems between organizations is to work with willing and engaged partners. All partners must be open to exploring new ways of approaching education and training. Be sure to have strong leadership and consider appointing co-chairs, keep detailed minutes, record actions and responsibilities, meet frequently and follow up. Also be sure to set realistic timelines for achieving goals and milestones.

### NEXT STEPS

Next steps include maintaining academic and employment relationships with existing industry partners and cultivating new partnerships with like-minded employers as well as other colleges and universities. Major employers such as Bruce Power and a number of SMEs seek out our expertise to train their existing workforces, to provide a pool of qualified candidates for employment and to solve their technical problems through applied research. We also look forward to growth opportunities in part-time studies, both on campus and through our growing online presence.

Ever mindful of the need to present possibilities to younger audiences, we are carefully growing affinity partnerships and activity clubs with a focus on STEM post-secondary education with local and regional primary and secondary schools. Robotics competitions, science fairs, and electric vehicle racing teams are strong examples.

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# LEADERSHIP DEVELOPMENT



# LEADERSHIP DEVELOPMENT

## GOLD: COLLEGES AND INSTITUTES CANADA LEADERSHIP INSTITUTES CANADA

### INTRODUCTION

Leading in the ever-evolving landscape of post-secondary education requires strong skills and tools to be effective and successful. Over the past 23 years, CIGan has been offering the latest management concepts and experience to prepare emerging leaders to successfully lead in the college and institute system. CIGan's leadership model contributes to institutional succession planning by looking at the competencies required to lead effectively in institutions of all sizes, addressing both career progression and the skills necessary to lead at a higher level.

### AWARD WINNING PROGRAM

CIGan's suite of college and institute specific Leadership Institutes target the particular needs and challenges of six different levels of leadership for positions in higher education:

- CIGan Leadership Institute for Program Chairs
- CIGan Leadership Institute for Managers (offered in English and in French)
- CIGan Leadership Institute for Deans and Directors
- CIGan Leadership Institute for Vice-Presidents
- CIGan Leadership Institute for Presidents
- CIGan Leadership Institute for Emerging Leaders of International

These institutes provide peer-based and practical training and development through an interactive environment, as well as coaching and mentorship opportunities for emerging leaders. Each institute is based on the leadership competencies of that level and provides participants with the opportunity to learn from distinguished college and institute leaders who share their stories, knowledge, and experience to underline the skills needed to lead in higher education.



### RESULTS AND ACCOMPLISHMENTS

CICan has transformed and graduated 969 leaders through its Leadership Institutes. In the last seven Leadership Institutes for Vice-Presidents, 21 have gone on to become college, institute or polytechnic Presidents – a testament to succession planning in the higher education sector.

### INTERNATIONAL VALUE

The successful CICan Leadership Institute model was adapted for other countries as well, specifically to enable senior leaders from international professional and technical education institutions to learn new concepts and perspectives on leadership, and to witness diverse and successful practices in the Canadian college and institute system. Often these revolve around the themes of how to better engage employers and surrounding communities, how to focus the culture and pedagogy of the college on the learners above all, and how to ensure that graduates do obtain or create employment.

For example the Chinese Government has sent over 100 of their Institute Presidents or VPs to Canada for one month each of leadership development and job shadowing of their equivalents in Canadian colleges. The Indonesian Ministry of Higher Education has sent 60 of their leaders for two to four weeks of leadership development and CICan has also delivered such sessions in compressed mode in other countries like Barbados, Tanzania and Vietnam.

The Leadership Institute for Emerging Leaders of International, which CICan proposed and delivered for the

first time at the Halifax WFCP World Congress, is now an integral part of every World Federation of Colleges and Polytechnics (WFCP) Conference.

### WORDS OF WISDOM

A leader is one who is more interested in the success of his or her staff than in his or her own success. They can connect mission and vision to priority actions for a team and create a culture where everything comes together and brings results!

### NEXT STEPS

CICan will be expanding its suite of leadership institutes to provide new opportunities for its members in areas related to key priorities and the mandates of the institutions. (e.g. Applied Research, Indigenous Education). Coaching and mentorship services may be explored in the future. We will continue to respond to international requests where possible and programs will be tailored in response to the needs of the requesting country.

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# LEADERSHIP DEVELOPMENT

## SILVER: ANN BULLER PRESIDENT AND CEO, CENTENNIAL COLLEGE CANADA

### INTRODUCTION

Ann Buller is president and CEO of Centennial College, one of the most culturally diverse postsecondary institutions in Canada. Her philosophy of education includes integrating a deep respect for diversity and an understanding of global citizenship into the curriculum, ensuring that all students are prepared to think critically about today's social justice and equity concerns. Since she assumed the presidency in 2004, she has transformed Centennial into a leading provider of globally-minded postsecondary education.

President Buller's leadership has been recognized with numerous awards, including the 2014 Chief Executive Leadership Award (Council for Advancement and Support of Education), 2013 Top 25 Women of Influence (Women of Influence Magazine), the Queen Elizabeth II Diamond Jubilee Medal (Governor General of Canada, 2013), Canada's Most Powerful Women - Top 100 (Women's Executive Network, 2010), President's/Chancellor's Award (North American Council for Staff Program and Organizational Development, 2010) and the Margot Franssen Leadership Award (Microskills, 2010).

### AWARD WINNING INDIVIDUAL

Over the course of her career in Canadian postsecondary education, President Buller has established a reputation for developing tomorrow's leaders, equipping students and colleagues with the skills they need to lead with integrity. She recognized that there was a need to provide leadership training that addressed the unique needs of increasingly diverse communities. To accomplish this, she implemented many innovative programs and initiatives designed to cultivate leadership competencies.

In 2008, President Buller launched the college's Signature Learning Experience (SLE), a groundbreaking initiative that embeds principles of global citizenship, social justice and equity into every student's education. The SLE prepares students to take on leadership roles in a global marketplace. It has four components:

- GNE500: A required general education course, Global Citizenship: From Social Analysis to Social Action explores diversity and discrimination in our



society and builds global citizenship and equity competencies in every student.

- Global Citizenship and Equity (GCE) student portfolio: The portfolio is a collection of artifacts demonstrating the learner's growth in GCE concepts and ideas over the course of the program.
- Faculty and staff training: Professional development opportunities related to GCE are regularly offered to members of the college community.
- Integrating GCE into the curriculum: GCE learning outcomes are integrated into all schools, at program and course levels.

The SLE sets Centennial apart. It offers both staff and students the opportunity to analyze current issues facing our communities and develop methods of addressing inequalities.

In the second edition of ***Our Book of Commitments***, Centennial's strategic plan, President Buller outlines eight promises that the college makes to its students. The first commitment states that the college will "bring the new essential skills to a global community." Under President Buller's direction, Centennial has achieved this, offering a truly borderless educational experience. Currently, 6,099 international students from 134 countries attend the college. In addition, all students have the opportunity to participate in Global Citizenship & Equity Learning Experiences (GCELEs), in which students travel abroad to learn about global cultures and working environments. Recent projects have included building greenhouses to provide sustainable food sources for orphanages in Peru, exploring entrepreneurial opportunities with Indigenous women on Walpole Island, examining biodiversity in the Amazon and working with coffee farmers in the Dominican



Republic. Since the launch of the GCELE program in 2010, more than 700 students and staff have participated in 50 social justice projects around the world.

President Buller's leadership initiatives and mentorships extend beyond the traditional college classroom. She is a trailblazer for women, having served as the first Chief Learning Officer in Canada and the first woman Vice President at Nova Scotia Community College. To build a foundation for the next generation of women leaders, she founded Strong Girls Strong Women, a girls' empowerment initiative designed to introduce youth from under-served neighbourhoods to a range of career options. Since launching in 2012, hundreds of girls between the ages of 9 and 14 have participated in this highly successful program, visiting Centennial's campuses to explore how education can unlock doors.

### RESULTS AND ACCOMPLISHMENTS

Upon assuming the presidency at Centennial, President Buller created a strategic plan emphasizing the importance of developing leadership competencies in all graduates. The plan stated, "Contrary to old wisdom, leaders are not born; they are created by the right environment and through mentors who give people the confidence and abilities to learn through others." To achieve her vision, President Buller created the Leadership Passport co-curricular program. Students who are interested in earning a Distinction in Leadership credential participate in extensive leadership training, including workshops, information sessions and four leadership experiences that embrace service learning and volunteerism. Students have greatly benefitted from this approach. Graduates who have attained this dual credential in leadership are equipped with the skills valued by today's employers and are ready to lead within their communities. To date, almost three hundred students have earned this recognition.

President Buller began her tenure at Centennial at a time when the college was facing a number of obstacles. Labour relations challenges, declining enrollments and increasing financial difficulties created a daunting landscape. Due to her visionary leadership, the college is now a financially stable, globally recognized institution—a true turnaround story. Results over 12 years include developing 84 new academic programs; eliminating long-term debt; closing operating funding gaps; raising revenues by 82 per cent (from \$143.2 million to \$260.9 million); increasing total enrollments by 68 per cent;

investing one-third of a billion dollars in capital expenditures; growing endowments from \$549K to \$23.7 million and creating 180 new, full time positions.

### INTERNATIONAL VALUE

President Buller's remarkable leadership has transformed Centennial into an institution that is at the forefront of internationalization in postsecondary education. Under her leadership, Centennial has established over 100 Memorandums of Understanding and Memorandums of Articulation with institutions, governments and industry around the globe, creating sustainable pathways for incoming and outgoing students. These pathways provide students with increased opportunities to study, work and live in Canada and abroad.

President Buller has directed the creation of partnerships, agreements and articulations with nations on every continent but Antarctica. She has built an institution known for working closely with government and industry to provide applied learning and a skilled workforce that meets global needs while positively impacting the economy. Due to the college's reputation and impressive results, international governments have approved Centennial's curriculum in China, Panama and South Korea. In addition, Centennial delivers ESL teacher training and curriculum development in Canada and offshore.

### WORDS OF WISDOM

Today's colleges must prepare their graduates with skills that encompass more than vocationally-oriented training alone. While Centennial remains committed to delivering applied learning in a dynamic setting, the college makes an even bigger promise to its students. Programs at Centennial integrate Global Citizenship and Equity (GCE) learning outcomes that encourage students to consider their roles and responsibilities as global citizens, analyze the use of the world's resources to achieve sustainability, identify and challenge unjust practices in local and global systems and support personal and social responsibility initiatives. To date, 422 courses have effectively integrated at least one GCE learning outcome.

By offering an atmosphere that fosters critical thinking and collaboration on challenging social issues, learners are prepared to meet the challenges of the workplace as well as challenges in the larger community. President Buller's goal is to prepare graduates for both meaningful careers and meaningful lives.

### NEXT STEPS

In order to ensure sustainability of the incredible work that has been accomplished at Centennial, President Buller incorporated principles of leadership, global citizenship and equity into two key documents that define the future direction of the college: *Our Book of Commitments*, the college's strategic plan, and *Leading Through Learning*, the college's academic plan.

In *Our Book of Commitments*, the eighth commitment outlines Centennial's Signature Employee Experience. This concept includes the creation of personalized learning plans and professional development opportunities designed to engage employees and encourage them to pursue skills that will prepare them to lead within the college system.

*Leading Through Learning* is built on the foundation of the strategic plan. It details nine learning themes that are emphasized throughout the college. Theme eight is "leadership and learning for all". This theme formalizes President Buller's vision to develop leadership competencies within employees and offer a leadership designation upon program completion.

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# LEADERSHIP DEVELOPMENT

## BRONZE: LAKELAND COLLEGE

### INVERTED, SERVANT, APPRECIATIVE LEADERSHIP CANADA

#### INTRODUCTION

Lakeland College is a rural college in northeastern Alberta, Canada. Lakeland serves over 7,500 students every year at its campuses in Vermilion and Lloydminster and through online, blended and off-site programming. Lakeland began as a School of Agriculture in 1913 and has evolved as one of Alberta's Comprehensive Community Colleges. Lakeland's strength is leading, learning which means providing learners with student-managed learning opportunities, where they take the lead. Students can choose from more than 50 different programs in Agricultural Sciences, Trades and Technology, Emergency Services, Human Services, Business, Health and Wellness, University Transfer, Energy and Environmental Sciences, and Interior Design Technology. Our student-managed focus gives credence to how Lakeland College has developed a concept of inverted, servant, appreciative leadership to produce leaders in education. Creating an environment where inverted leadership is applied, Lakeland has grown its own leaders, creating a sustainable future for our workforce and for others.

#### AWARD WINNING PROGRAM

Lakeland College's concept of inverted, servant, appreciative leadership demonstrates to the world how post-secondary organizations can be a leader in coping with the current issue of 'brain drain'. Since its inception in 1913, the college has actively demonstrated a practical and applied approach to teaching and learning. We saw the need to develop our own leaders and have provided mentorship opportunities for both staff and students to take the lead. We have integrated both community members and industry representatives by inviting them to serve on the Board of Governors or become advisory committee members. In these capacities, members of the community and local industry provide feedback, mentor, and critique our students and employees. Local community and industry members are actively engaged with students and staff projects and have been for years.

As our conceptual idea of growing our own leaders continues to evolve, we pride ourselves in giving our people the opportunity to develop their potential. Developing leaders is a shared process; it requires

fostering an environment of trust, respect and mentoring from behind. Leaders who have gone before have cultivated a place which passes on the culture of growing our own and producing accomplished leaders.

#### RESULTS AND ACCOMPLISHMENTS

Lakeland's objective was to grow our own leaders and provide opportunities for our people to be recognized for their accomplishments. Although our objectives have been met, (many Lakeland leaders grew and developed within the college and are now in leadership roles) this plan is a work in progress as developing our people is an ongoing process. Professional and technical training and education are ongoing. As our leaders take on new and different roles, their needs, skills development, and professional enhancement continue to evolve and change. The need for innovative learning is always sought out and valued; higher education is the perfect realm to enhance this type of development.

#### INTERNATIONAL VALUE

Fostering an environment which promotes development and growth can be easily transferable when the assumptions of the organization's value align and when there is a commitment to promote personal development in employees and students. The Lakeland experience provides a model which is unique, yet easily transferred when there is alignment of values and beliefs within the senior leadership.



### WORDS OF WISDOM

Commitment to building people within your organization is exciting. As you see leaders developing, their voices take on a quality of their own; they reach beyond where you thought you were. Be mindful of how you can support their further growth and remember what others did for you as you developed your own wings and began to fly above what you thought was out of reach.

### NEXT STEPS

Lakeland College is committed to developing staff and student leaders. Our new brand strategy focuses on student-managed learning experiences. Employees at Lakeland College are on a journey to create more opportunities for students to lead. Each academic school is searching for more leadership activities for students. Each leader is thinking about succession planning. Employees interested in leadership roles are encouraged to learn more and start preparing for future opportunities. We continue to empower our people to reach their potential; in doing so, leaders are continuously developed.

Our goal is to continue to find ways to enhance what we do. We continue to reflect on what has worked well previously while moving forward to develop our leaders and advance our college. We pride ourselves in finding ways to grow, develop and sustain what is working and change what will enhance our future. This is Lakeland. Leading. Learning. Since 1913.

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**STUDENT  
SUPPORT  
SERVICES**

# STUDENT SUPPORT SERVICES

## GOLD: QINGDAO TECHNICAL COLLEGE CHINA

### INTRODUCTION

Qingdao Technical College (QTC), mutually governed by Shandong province and Qingdao City, was founded in October 2000, on the foundation of the then Qingdao Workers' University, and merged with the former Qingdao Education College in 2002 to form what QTC is today. It mainly focuses on full-time higher vocational education and social training, giving consideration also to continual education, international joint programs, and middle school teachers and headmasters training. The college is qualified to employ foreign experts and receive international students. Over years, QTC has successively become a key model vocational college in Shandong province, and the winner of China's Outstanding President of Vocational Colleges, the National Advanced Vocational College and one of the first model vocational colleges in China. Currently, the college has 776 full-time staff and 11,000 students. As of now, QTC has established friendly relations with 80 institutions from 21 countries and regions.

### AWARD WINNING INSTITUTION

QTC is one of the first model higher vocational colleges in China. Since its establishment, QTC has been honored by a variety of awards including National Advanced Provider of Vocational Education, National Employment Competitiveness Demonstration School, and National Advanced Collective in Mental Health Education. The college adheres to a comprehensive idea of education

and sustainable development. It sets up service and support platforms for students through multiple channels and created "the all members, the whole field and the whole procedure system" and "the happy garden for living, good garden for study and fascinating garden" campus. Over 40 thousand graduates have stepped out of this college and into the society. With an employment rate of 97% for seven consecutive years, QTC has become a strong support for local economy and social development.

QTC applied for Awards of Excellence in Student Support Services for the following achievements:

- Taking a lead in establishing China Vocational Colleges Counterpart Cooperation Alliance, and Union of Higher Vocational Colleges for Independent Planning Cities in China, providing students with platforms to share high quality education resources from the advanced areas by means of co-construction of courses and mutual recognition of credits.
- Strengthening morality education. QTC takes voluntary service as a good carrier or supporter to cultivate students' sense of social responsibility and spirit of dedication. To be a volunteer has become the second identity of QTC students. During the course of college study, students can not only master skills for employment and living, but also grow into great persons to enrich themselves, dedicate themselves to the society and love others. To date, 3 students of QTC have become unrelated hematopoietic stem cell donors, and 101 have become engineers to provide good services for the Olympics.
- In each of its schools, the Support Center offers a holographic help for student developments. Moreover,

fostering students' capacity of doing scientific research is also an integral part of its daily teaching, on average with over 60 research projects approved every year. Several innovations and inventions of the students have been applied to production in such big enterprises as Haier. QTC spearheads the effort to implement Student Assistant System among its counterpart vocational colleges, and sets up student commission to maintain their own rights and ensure that they participate in the management of the campus.

*QTC students psychology training.*



### RESULTS AND ACCOMPLISHMENTS

Over their 3-year study, students will acquire both the professional skills and the qualities of morality and humanity.

QTC attaches importance to students' physical and psychological health and builds up a great atmosphere of psychological education, involving opening compulsory courses, creating psychological files, and managing crises dynamically. In the meantime, the college's Quality Development School integrates selective courses with themed lectures and student clubs and associations, effectively nourishing students' individual development and personality.

QTC continually perfects its joint education mechanism (or Six in One Mechanism), involving college, family, enterprise, government, society, and student, and conducts an in-depth cooperation with industries. So far, it has set up 3 entrepreneurial incubators and training bases or centers of municipal level, incubating more than 30 projects and providing over 200 working posts yearly.

To improve the international competitiveness of its students, QTC puts forward Training Excellence Scheme, conducting disciplinary cooperation, exchange students and study tour or visit with such overseas countries or regions as Canada, New Zealand, the United States, and Taiwan. For the time being, 48 students have benefited from the study tour program, over 200 transferred to overseas universities and more than 150 students got employed overseas.

### INTERNATIONAL VALUE

#### **Actively expanding the education platforms.**

QTC highlights the teaching features of Chinese as a foreign language in higher vocational education, and created an education mode for vocational Chinese named "Class Teaching + Enterprise Practice", with more than 1600 students from Korea, Canada, Holland, Japan, France, etc. trained successively under this mode of education. Six overseas alumni associations have been set up in France, Singapore, Japan, Korea, New Zealand, and Ireland.

**Actively doing comparative research.** More than 50 experts employed from the USA, Germany, Canada, Korea and Holland, etc. have offered trainings for teachers or made exchanges with these teachers in teaching methods and reforms of teaching modes. The UNESCO Industry-University Collaboration Chairs Research Base and the Studio for experts from China and Holland were established in QTC. The curriculum system reformed by localization of Holland's CBE (Competency Based Education) mode has benefited 94 higher vocational colleges in China.



QTC students club activities.

### WORDS OF WISDOM

*Let Students Be the Best of Themselves* is QTC's educational goal, for which it implements a training mode of *Learning, Teaching and Doing in One*, launches an initiative to facilitate students' creativity, and opens a series of public courses focusing on innovation and entrepreneurship. Its scientific tiered curricular system is further classified into professional qualification, academic research, practical training, and clubs and associations activities. In each of its schools, the Support Center offers a holographic help for student developments.

### NEXT STEPS

QTC will continue to uphold the college motto of "Developing Skills for Application" and implement the strategy of "Brand-oriented College Running". QTC will maintain "Being Skillful and Moral" as the students cultivation target, and take "Help Each Student be the Best of Him/Herself" as the mission.

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# STUDENT SUPPORT SERVICES

## SILVER: NORTHEAST COMMUNITY COLLEGE STRENGTHENING STUDENT ADVISING UNITED STATES OF AMERICA

### INTRODUCTION

Northeast Community College, located in Norfolk, Nebraska, USA, is a comprehensive community college that provides vocational/technical, liberal arts, college transfer, and continuing education. It is the only community college in Nebraska with one-and two-year vocational, liberal arts, and adult education programs all on one main campus. The College also has three extended campuses and two regional offices to serve the needs of off-campus students in the 20-county service area.

Northeast is accredited by the Higher Learning Commission to award two-year Associate of Arts, Associate of Science, Associate of Applied Science, and Associate in Nursing degrees, one-year diplomas, and certificates.

Northeast Community College's eleven-member Board of Governors has approved a five-year strategic plan, Vision 2020, that includes four primary goals - Increase student success; increase student access; provide a globally competitive workforce; and develop and maximize resources.

Dr. Michael Chipps, president, serves as the United States representative on the WFCP Board.

### AWARD WINNING INSTITUTION

Northeast reviewed student surveys to identify institutional strengths and deficits that may impact completion. One of those deficits was found in academic advising. As a result, Strengthening Student Advising became a campus-wide initiative. A consultant was enlisted from the National Academic Advising Association (NACADA) to conduct an audit of our academic advising system. After reviewing the results of the audit, a seven-member team made up of vice presidents, deans, staff, and faculty attended a week-long NACADA Advising Institute.

The team received guidance from national advising experts to develop a five-year vision and plan to redesign advising at Northeast. The first initiative was to hire a team of students to serve as peer advisors. These peer advisors went through intensive training and were able to staff office hours and meet with their peers across campus. They also

assisted faculty advisors with group advising sessions throughout New Student Registration during the summer. These services are continuing in the 2016-17 academic year.

The team, which involved stakeholders from both educational services and student services, formalized an academic advising mission, vision, and philosophy for Northeast and created an academic advising syllabus. The message that advising is for academic and career success, rather than just "course registration," is changing the culture of advising across campus. A core team of ten faculty and staff attended train-the-trainer sessions to become the Academic Advising Training Corps. This advising team has implemented college-wide advisor training for all employees, and has begun to develop the framework to shift to a team advising structure comprised of both first-year advisors and program faculty with mandatory advising and a first-year seminar course for all students. This course is being piloted during the fall 2016 semester.

Academic support services were also expanded, and are free to all students and are available during a variety of daytime, evening and weekend hours. Students may utilize drop-in tutors and tutoring by appointment with peer or professional tutors. The number of students receiving tutoring increased from 141 in 2012-13 to 589 in 2014-15. The Writer's Clinic and Math Success Center provide additional support in English and math. Math faculty created the Math Success Center which is staffed by math instructors and professional tutors who assist students on a drop-in basis.

An important component of this plan is for the first-year advisors and faculty to utilize the newly implemented Salesforce customer relationship management database to record communications, track early alerts, and document interventions with students. In addition, Salesforce will assist in identifying the most at-risk students by providing a FAME score that has been developed by a team of Student Services and Technology Services staff at Northeast.





This score takes into account the following factors: Family, Academic preparedness, Motivation, and Economics. Studies have shown that these indicators are predictors of student success. Salesforce will provide both the faculty advisors and first-year advisors a collaborative tool allowing for a holistic advising experience for students. In addition, the data we collect in Salesforce will allow us to develop high impact interventions.

### RESULTS AND ACCOMPLISHMENTS

The entire campus - all faculty, staff, and administration - completed advisor training at the close of the 2014-15 academic year. Some received level one training while others received a more intensive level two training. To have all of the campus participate in professional development, led by Northeast's internal Advising Training Corps, is quite a feat. This demonstrates the level of importance that is being placed on the Strengthening Student Advising Initiative and the commitment of the entire campus to make student success a priority at Northeast. Three Northeast staff were selected to present a session in March 2016 at the Annual Higher Learning Commission (HLC) Conference, the college's regional accrediting body, regarding the cross-divisional teamwork that was utilized to create Northeast's own predictor of retention and retention improvements through "Salesforce" – the college's customer relationship management tool.

In addition, these same staff were featured in a nationwide webinar that included 400 individuals from institutions from across the United States to demonstrate the innovative tool that they created. All of the Strengthening Student Advising efforts have truly made a difference for students at Northeast. In fall 2015, Northeast learned that it had increased its retention rate from 69% to 75% for full-time students, and from 29% to 38% for part-time students. Northeast's graduation rate also increased from 46% to 48% for the fall 2012 cohort. Increases such as these, in just one year, are very dramatic and show the dedication and commitment of Northeast faculty, staff, and administration to increasing student success.

### INTERNATIONAL VALUE

Our Strengthening Student Advising Initiative is a model that could be developed at any WFCP institution from Australia to Zimbabwe. The critical first step for us was to identify our institutional deficits through looking at our Noel-Levitz Student Satisfaction Survey results. We choose to truly make use of the survey results instead of just allowing them to sit on a shelf. This allowed us to select the right project for our institution and make this project an institutional priority. Although this project was

specific to meeting our campus needs, academic and career advising is a necessary function of all institutions. Throughout the five-year plan, there are many different parts that could be applicable on a variety of college campuses, especially with the increased focus on college completion.

### WORDS OF WISDOM

The first lesson we learned was that cross-divisional collaboration not only enhanced the project, but increased college-wide buy-in as well. Previously, Student Services staff would take the lead on retention and completion initiatives, but often it was a challenge to get faculty on board. The decision to have this initiative led jointly by Educational Services faculty and Student Services staff was a strategic one. This same successful cross-divisional approach was taken in developing Salesforce and the FAME score, with Technology Services and Student Services staff working together.

The second lesson we learned was that by having the president name this initiative as a college priority, it helped set the stage for the project. It raised awareness by placing great significance on the role of the advisor, which was the first step in changing the campus culture, and increased participation in the college-wide professional development as well.

### NEXT STEPS

The foundation for the advising redesign has been built with college-wide advisor training for all employees, and this fall we will continue with the third phase of advisor training. The plan is to shift to a team advising structure comprised of both first-year staff advisors and program faculty who will take a team approach to advising. First-year advisors will be assigned to specific programs, and they will engage with the students in those programs to assist in their transition to college life. The students will then move to their program advisors during their second year for assistance with internships, transferring, and employment. In addition, we plan to implement a mandatory first-year seminar course, which is being piloted this fall. An important component of this plan is for the first-year advisors and faculty to utilize the newly implemented Salesforce to record communications, track early alerts, FAME scores, and document interventions with students.

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# STUDENT SUPPORT SERVICES

## BRONZE: YANGZHOU POLYTECHNIC INSTITUTE THE SERVICE MODE OF SUPPORTING STUDENTS ORIENTED TOWARDS STUDENTS CHINA

### INTRODUCTION

Yangzhou Polytechnic Institute (YPI) is a full-time Institute officially approved by Jiangsu Provincial People's Government. It is situated in Yangzhou, a well-developed historical and cultural city. Jiangsu Province is situated in the east of China, whose economy is prosperous and education level high. Urban agglomeration on Yangtze River Delta (UA-YRD), which covers Jiangsu, is one of the six agglomerations around the world.

Having advantages in education and scientific research conditions including National Training Bases run by the central government's fiscal support, Provincial High Vocational Training Bases, provincial project research and development center, state-of-the-art training facilities, YPI provides the favorable platform training students into high-quality vocational personnel with firm theory knowledge and practical ability of technology. The case of YPI Oriented towards Students was excerpted from "Report on the Quality of China's Higher Vocational Education (2016)". In July, 2016, the typical case of YPI's Promoting Students' Growth by Constructing Platforms, Establishing Systems, and Seizing Nodes was again excerpted from "Typical Cases of Educational Reform and Innovation in Jiangsu Province".

### AWARD WINNING INSTITUTION

YPI adheres on the service mode of supporting students oriented towards students, lays emphasis on the

improvement of students' social responsibilities, organizing abilities, team spirit, innovational consciousness, and moral qualities, and encourages students' efforts to self-educate, self-manage and self-serve. The followings are demonstrative modes of constructing distinctive students' management among higher vocational colleges.

- Clear obstacles on the path to democratic communication and democratic management. Four democratic channels have been opened up, namely the President's Breakfast Meeting, the student assistant to president, chairman of students' union attending the presidents' office meeting and monitors' forum.
- The award system with individualization and direction has been established. For example, the presidential medal is set up, wholly funding students to Taiwan for research and learning, awarding the degree of Vice Bachelor.
- Construct the platform for students' growth from several aspects. For example, College Students Activities Center, College Students Health and Growth Center, Movable Library, Eagle Fund for Business Startup, Listening-Reading-Acting with Joy Project.
- Explore the educational meanings of typical ceremony on campus. We lay emphasis on ceremonies such as opening and graduation ceremonies, the first class in the new semester, collective 20-year-old birthday party and so on.
- Raise students' satisfaction for institute and their sense of recognition. Internally pay attention to cultural guidance, while externally set up good images.
- Improve the quality of counselor team. Implement the Counselors' Advancing Project. Set up the growth file for every counselor and growth points.

By closely related with the needs of the industries, regional economic and social development, relying on school-enterprise cooperation council, taking the integration of industrial park and institute as pivot of school-enterprise cooperation and school-locality cooperation, YPI has established 7 distinctive industry and education alliances including petrochemical, architecture, IT, automation, machinery, automobile, modern services, and formed the new cooperative school-running system of "Region, Park, Enterprise and School". The case of "Deepen the collaboration among Region, Park, Enterprise and School Relying on the Industrial Park" was excerpted from "Report on the Quality of China's Higher Vocational Education (2015)"

Campus culture has become a brand: The featured campus culture has been cultivated. Elegant At into College, PE Cultural Festival, College Students Art Show and so on have been carried out.

The faculty team has become more qualified. An outstanding faculty team of higher academic and research level, better educational skills and technologies, stronger sense of serving students has been constructed.

Students' satisfaction has been significantly improved. The higher vocational students' management concepts have been innovated. The content system of higher vocational students' management based on students themselves has been reconstructed.



### RESULTS AND ACCOMPLISHMENTS

YPI innovates higher vocational educational concept and grasps the core of the connotation development of higher vocational education. YPI innovates educational carriers and analyzes the features of higher vocational students' group. YPI innovates management modes and brings new ideas to team construction based on the improvement of higher vocational students' core abilities.

Social impact has gradually enhanced. YPI's concepts of Serving Students and Helping Students Succeed, Oriented towards Students have been recognized by the mass media. In 2015, People's Daily reported the features of YPI's concepts of Serving Students and Helping Students Succeed, Oriented towards Students, bringing a good social influence.

*Overseas students of intake 2015.*

The systematic regulations and ensuring platform have been established. These could bring practice guidelines for other higher vocational colleges' students' management work.

Social satisfaction has been greatly improved. In June, 2016, YPI ranked the 5<sup>th</sup> among the ten most influential institutions of the new media issued by Chinese Youth.

### INTERNATIONAL VALUE

For years, YPI has adhered to the concept of open education, actively advances the strategy of education internationalization. The multi-regional and multi-level network for cooperation exchanging has formed the

prototype. The joint education programs with more than 40 overseas institutes, colleges and research organizations from Korea, Australia, France, Singapore, Germany, the U.K., ASEAN, Hong Kong, Macau and Taiwan Area have been undertaken. The mode of cooperation includes co-operative education, the teachers and students' exchange visits for research and study.

For recent years, YPI has mainstreamed the internationalization improvement plan into the key career development plan so as to positively respond to the national strategy "the Belt and Road Initiatives" and broadened the overseas education market, contributing to extending students' multi-cultural exchanges.

In 2015, YPI initiated and implemented the College Students Overseas Experience Plan, the International Students Scholarship Project. In 2016, YPI was awarded as one of Cultivating Institutes for Overseas Education, whose number was 17, only 7 higher vocational colleges were awarded. Meanwhile, YPI won 2016 Jasmine Jiangsu Government Scholarship qualification. It was the first time that YPI had won the Government Scholarship since the launching of foreign students education, also symbolized Jiangsu Educational Department's recognition of foreign students educational scale and quality in YPI.

### WORDS OF WISDOM

It is a great honor to attend WFCP. Thank Ms. Denise Amyot for your support. Thank the committee for all the considerate arrangement. We cherish every moment for understanding and learning vocational education in different countries,

especially the latest accomplishments and development trend in the field of higher vocational education. We hope all the attendees make unremitting jointly efforts to construct higher platform for sharing information, exchanging experiences and professional discussion.

### NEXT STEPS

With the help of the platform offered by WFCP, we hope to establish connections with higher vocational colleges and learn from each other. We will enhance the inter-institutional cooperation, stimulate vocational colleges' vitality and promote the international development of higher vocational education in China. We will enhance the experiences exchange and international cooperation with vocational institutions in different countries, share and promote the best practice of vocational and technical education, boosting the development of global vocational and technical education.

### CONTACT

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# #WFCP18

## LOOKING FORWARD: MELBOURNE 2018

The 9th WFCP World Congress will be held in Melbourne Australia in October 2018. TAFE Directors Australia will host the World Congress with support from Victorian TAFE Association, and the Melbourne Convention Bureau. Melbourne 2018 will:

- highlight the latest trends and challenges in the professional and technical education and training sector;
- offer significant networking opportunities for WFCP members;
- showcase best practice under the proposed theme and across the Affinity Groups both within and outside the WFCP membership; and,
- contribute to professional development opportunities for WFCP members.

The annual TDA Convention will be held in conjunction with the World Congress and delegates will have the opportunity to attend to gain insight into Australia's domestic professional education sector. In addition to the hallmarks of the World Congress: social events, Awards of Excellence, and Youth Camp, amongst others, 2018 will feature local cultural elements, including a Traditional Aboriginal Welcome and A Digeridoo Experience.

Melbourne is an international convention hub with free public transportation, accommodations close to the Convention Centre, and a variety of nightlife options. The 2018 World Congress has been tentatively scheduled for October 8 – 10, 2018.

# AWARD CATEGORIES

The Awards of Excellence are handed out for the following:



**Access to Learning and Employment** – To be awarded to an individual, institution or institutional association that has developed effective channels to increase access to learning and employment for students.



**Applied Research** – To be awarded to an individual, institution or institutional association that has demonstrated excellence in addressing real-world challenges through applied research



**Entrepreneurship** – To be awarded to an individual, institution or institutional association that has demonstrated excellence in integrating entrepreneurship into academic curriculum and/or implemented innovative entrepreneurial activities.



**Green Colleges** – To be awarded to an individual, institution or institutional association that has demonstrated excellence in advancing environmental sustainability through knowledge, tools, practices and technologies



**Leadership Development** – To be awarded to an individual, institution or institutional association that has demonstrated excellence in developing the next generation of college leaders



**Higher Technical Skills** – To be awarded to an individual, institution or institutional association that has demonstrated excellence in partnering with industry to improve access to jobs and meet the skills needs of the 21st century workforce



**Student Support Services** – To be awarded to an individual, institution or institutional association that has demonstrated excellence provision of services that support students throughout their college experience.



World Federation of Colleges and Polytechnics

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