

### BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY Annual Review 2010–2011





### **ABOUT BCIT**

> BCIT is one of British Columbia's largest post-secondary institutes and has served British Columbia for over 40 years. We provide industry-relevant education, supply the labour market with highly skilled graduates, and conduct applied research that addresses industry challenges.

### **CAMPUSES**

- Burnaby Campus houses 60 buildings on 158 acres
- Downtown Campus in the heart of Vancouver's business district
- Marine Campus on the North Vancouver waterfront
- Aerospace Technology Campus in Richmond houses our fleet of 20 aircraft
- Great Northern Way Campus in Vancouver (in partnership with Emily Carr University of Art and Design, Simon Fraser University and University of British Columbia)

# **President's Message**

I am pleased to introduce the 2010-2011 BCIT Annual Review. This past year, year two of BCIT's five-year strategic plan, was marked by a number of successes.

We've celebrated with our students as they excelled in their classes, earned scholarships, won awards and crossed the stage at Convocation.

We've watched as a number of major projects drew closer to completion, including the Burnaby Campus' Gateway Building, the state-of-the-art Centre for Energy Education and Research, and the leading-edge marine simulation centre at the BCIT Marine Campus.

We've seen BCIT emerge from a deficit in a strong financial position. And we've continued to conduct our operations according to the guiding statements underpinning our strategic plan.

BCIT: Integral to the economic, social, and environmental prosperity of British Columbia. That vision honours a proud past and is a bold claim on the future. In order to realize on that claim we will need to continue to be a responsive, innovative leader within the field of education, anticipating future needs while continuing to deliver the quality hands-on instruction for which we are renowned. Applied research, focused on solving the problems of industry, will also be an important part of our contribution to British Columbia's prosperity.

We have made major progress in the past year, and I look forward to the challenges and opportunities ahead.

Sincerely,

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Don Wright, President, British Columbia Institute of Technology

# 2010/2011 Highlights

- BCIT approved several new programs, including the Advanced Specialty Certificate in Sustainable Business Leadership, Associate Certificate in Business Essentials, and International Partnership Certificate in Digital Animation (Brazil).
- > Biomedical Engineering students took top honours in the ALS Society of BC's Dr. Jim McEwen Excellence in Engineering Design Awards for their electronic communication device designed to improve the quality of life for those living with ALS.
- > Dr. Fitsum Tariku was named BCIT's first-ever Canada Research Chair. Fitsum, director of BCIT's Building Science Centre of Excellence, is the new Canada Research Chair in Whole-Building Performance.
- > BCIT Library and Learning and Teaching Centre staff developed a web evaluation game to help students learn how to assess online sources and information.
- > The School of Business became a platinum sponsor of the Leaders of Tomorrow and Company of Young Professionals: mentorship and leadership development programs of the Vancouver Board of Trade.
- > The School of Manufacturing, Electronics and Industrial Processes changed its name to the School of Energy to better reflect its focus on process industries as well as power generation and transmission.

- > BCIT partnered with Life Sciences BC to launch the Interdisciplinary Cleantech Student Intern Program, designed to provide students with the opportunity to work on clean technology projects.
- > The BCIT Centre for Architectural Ecology co-hosted CitiesAlive 2010, an international green roof and living wall conference.
- > Tamara Taggart and Mike Killeen, graduates of the BCIT Radio program, became the new anchors of CTV News at Six.
- > Several School of Business programs were accredited by the Canadian Institute of Management, including the B.Tech in Accounting, DiplT in Business Management, DiplT in Human Resource Management, and DiplT in Information Technology Management.
- > John Furlong, Peter Legge, Jack Munro, Peter Robinson, Rudy North, and Arun Garg received Honorary Doctor of Technology degrees, BCIT's highest honour.
- > BCIT students were the beneficiaries of a mobile crane donated by Ledcor Group as part of a larger gift made to mark its 60th anniversary in 2007. The company endowed \$100,000 to create annual awards for students as well as \$400,000 for program development, training, sustainability initiatives, and equipment.



The BCIT Marketing Association had its strongest showing in years at the 2011 Americar Marketing Association International Collegiate Conference, held in New Orleans



## **BCIT Marketing Association students excel** at international conference

For marketing students, the American Marketing Association (AMA) International Collegiate Conference is a once-in-a-lifetime opportunity to network, learn, and share ideas.

Student members of the BCIT Marketing Association (BCITMA) have been making the trip to the annual conference for years, and in March 2011, 26 members of the student club travelled to New Orleans to attend the three-day event.

Marketing Management instructor and BCITMA faculty advisor Geoffrey Bird says the conference offers a number of excellent learning opportunities, with seminars and dynamic guest speakers that offer insights into current marketing trends.

The networking opportunities are similarly valuable. "There are over 1,300 students at this event," says Geoffrey. "It's a chance for BCIT

students to show what they have learned and to see that the school that they have chosen— BCIT—is on par with other leading business schools in the US."

BCIT students competed in a number of marketing-related competitions, picking up a number of recognitions, awards, and prizes, including a third-place finish in the SABRE Business Simulation Competition, a second-place standing in the Nintendo Case Competition, and "Best Overall" in the Exhibit Booth Competition. The team also received Silver Chapter status, a cumulative award acknowledging the chapter's achievements throughout the year. With its Silver status, the BCITMA is recognized as being in the top 16 out of 300 collegiate chapters in North America an outstanding accomplishment. Engineering programs grow with introduction of new master's degrees in Building Science and Civil Engineering accreditation

In March 2011, BCIT introduced Western Canada's first ever master's degrees in Building Science: a Master of Engineering and a Master of Applied Science in Building Engineering/Building Science.

Developed through the Building Science Centre of Excellence in the BCIT School of Construction and the Environment, these programs will meet industry demands through applied research and advancing the state of practice.

"BCIT is an active participant in applied research, and these master's programs will enable BCIT and the Building Science Centre of Excellence to further contribute to the prosperity of British Columbia," says Don Wright, president of BCIT.

The degrees will provide students with integrated science-based knowledge and the skills necessary to meet the challenges of industry. The curriculum focuses on responding to future trends with particular consideration given to practical applications. The program offers a one-year, full-time Master of Engineering degree option, which combines an intensive set of courses with an applied research project, and a full-time Master of Applied Science option, which requires a smaller set of courses and a more in-depth fundamental research project over two years. Both programs will be offered beginning in September 2011 and can also be taken on a part-time basis.

In 2010, the School of Construction and the Environment saw its Civil Engineering degree program accredited by the Canadian Engineering Accreditation Board, marking the first time the Board has granted accreditation to a non-university Civil Engineering program.

This significant achievement confirms the program's acceptance within the professional community while allowing program graduates to directly apply to their professional association for registration.



# Forensic nursing pioneer continues to lead in her profession

Defined by the International Association of Forensic Nurses (IAFN) as "the practice of nursing globally when health and legal systems intersect," forensic nursing is pivotal to police investigations wherever there has been injury or trauma. Many forensic nurses work as sexual assault nurse examiners—caring for the patient while also recognizing, collecting, and preserving evidence.

While forensic nursing services are becoming more common in hospitals globally, a real need exists for these services—especially in developing countries. So when Sheila Early, instructor and program coordinator for the School of Computing and Academic Studies' Forensic Science and Technology department, met Elizabeth Muhkisa at the IAFN conference in 2009, she was inspired to take action.

Elizabeth, a sexual assault nurse examiner from Kenya, had been awarded an IAFN scholarship to attend the conference in Atlanta, Georgia. Without the support of the scholarship, travel to the U.S. would have been impossible for the longterm employee of Kenyatta National Hospital's Gender Based Violence Recovery Center. In fact, the IAFN yearly membership fee is almost equally out of reach for Kenyan nurses; at \$30, the fees represent a significant and prohibitive cost for nurses earning just \$500 a month.

"I thought, well, I can sponsor a few memberships," Sheila remembers. "It's a relatively small amount of money for us, but for nurses in Kenya, it's huge."

Sheila has since personally sponsored six Kenyan nurses' memberships, giving them access to resources and connection to a larger community of forensic health workers. She has also sponsored subscriptions to the Journal of Forensic Nursing and spread word of the Kenyan nurses' need among the forensic nursing community, garnering additional support and sponsorships.

This isn't the first time Sheila has taken a leadership role in the profession she is so passionate about. In 1993, Sheila established the Surrey Memorial Hospital Forensic Nursing Services Unit, the first in the province. She recently received an Achievement Award from the IAFN for her work in forensic nursing nationally and globally, and a Ruby Award from Soroptimist International of the Tri-Cities for her work impacting violence and women in health care and in the community.



Michael McClelland, third from right, competes alongside fellow "Team Speedo" members in the VEX Robotics Competition.

> High-school students gain engineering acceptance through robotics competition

Every year, more than 3,500 student teams from 20 countries compete in over 250 robotics tournaments globally. Collectively, these tournaments are part of the VEX Robotics Competition: the largest and fastest growing middle and high-school robotics program in the world.

For the past two years, BCIT has played host to the British Columbia VEX Championships—the qualifying event for the VEX World Championship—a large-scale robotic competition in which competing teams, with guidance from their teachers and mentors, use the VEX Robotics Design System to build the most innovative robots possible, working together to score the most points against opposing teams.

Each year, the top winners of the BCIT competition have walked away with more than just your standard medal or trophy; in addition, each of the top competition winners were awarded conditional acceptance to a School of Energy engineering program at BCIT. "Conditional acceptance means that as long as the student meets the prerequisites, they are accepted to an engineering program of their choice," says Vicki Asada, school development manager for the School of Energy.

Michael McClelland, a student at H.J. Cambie Secondary School in Richmond, was on one of the winning teams and he is taking advantage of his prize. He was accepted to the BCIT Mechatronics and Robotics program for fall 2011.

"Engineering appeals to me because I enjoy, and am inspired by, creative solutions involving technology," Michael says. "Also, involving many fields, such as electrical components with mechanical ones, means even more creative solutions. I also like the whole team collaboration thing, and brainstorming with others of similar mindset."

Based on the success of previous years' events, the School of Energy plans to host the 2012 competition, and once again offer conditional acceptance to its winners.



# **3D technology helps Prosthetics and Orthotics students get the full picture**

Jason Goodnough, program head of BCIT's Prosthetics and Orthotics program, has never shied away from using technology in his classroom.

"Prosthetics and orthotics is best learned in a dynamic, hands-on environment," he says. "It doesn't come off the page so well."

And if the best way for students to grasp the complex 3D movement of human joints is through a web-based multimedia platform? So be it.

"Prosthetics and Orthotics uses 3D concepts, so it's best learned in 3D," says Jason. That's why he's spent the past few years developing a teaching and learning platform in conjunction with the BCIT Technology Centre and using a generous software donation from Vancouverbased NGRAIN, which allows students to truly visualize and interact with their subject matter. Prosthetics and Orthotics Simulation Training, or POST, as the platform is named, gives students the freedom to view and explore all parts of knee joint anatomy.

"Students can click on a bone or ligament, remove it, rotate it, or view a description of its function," says Jason. "They can manipulate and navigate through the platform at their own pace. They can spend more time in a particular area if they want to, rather than having to go at the instructor's speed. It gives them more control over their learning outcomes."

POST is a perfect example of what can happen when industry, research, and education come together. "We couldn't have done it without NGRAIN's donation of their interactive software," says Jason. "And the expertise at the BCIT Technology Centre, particularly that of Silvia Raschke, Dave Kenyon, Kathy Siedlaczek, Melanie Sia, Vienna Ly, and Alistair Boakes, was invaluable."

# Railway Conductor program helps put Aboriginal students' careers on track

Several First Nations students were sponsored through BCIT's Railway Conductor program in a ground-breaking initiative supported by the Railway Association of Canada, Assembly of First Nations, and Human Resources and Skills Development Canada. Students were recruited with the help of BCIT Aboriginal Services.

Three groups of Aboriginal students went through the 17-week program that prepares graduates to work as train crew in either road or yard service. All graduating students have found employment with either Canadian National or Canadian Pacific Railway.

"Our near decade long relationship with BCIT in developing and guiding the Railway Conductor program has helped the Railway Association of Canada and its members to attract and benefit from a talent pool with demonstrated and genuine interest in the unique and rewarding careers available within the rail sector in Canada," said Colleen Walsh, director, Workforce Development, Railway Association of Canada. "BCIT's commitment to attracting and guiding Aboriginal students to success in other academic programs was a critical factor in our decision to extend our relationship with BCIT to establish the Aboriginal Railway Conductor program."

Chief Instructor Monica Serbanescu is positive about the program outcome. "Our placement rate is close to 100 percent. And it's good, solid employment," she says. "It's a career for life."





# Sustainability initiatives result in significant electricity savings

With a population of over 18,000 full-time students, 28,300 part-time students, and 2,250 faculty and staff, BCIT faces environmental challenges similar to those of a small city. And as the BCIT population grows, so do the stresses on transportation, energy, and waste management systems.

A leader in sustainable practices—BCIT has had a comprehensive recycling program in place since 1994 and has composted its food waste since 1998—BCIT was named one of Canada's top 50 greenest employers by the *Globe and Mail* in 2010.

But early successes have not made the BCIT community complacent. The Sustainability Committee, which oversees the implementation of the BCIT Sustainability Policy, is continually seeking to address sustainability in education and research, campus operations, and within the BCIT community.

One of the stated goals of the Sustainability Committee was to reduce BCIT's total energy consumption by eight percent over the 20082009 baseline by March 31, 2011. To support this goal, an initiative known as the Light Savers Challenge was created to eliminate unnecessary light use across BCIT campuses. Along with initiatives such as building retrofits and a campaign that encouraged staff to "power down" their classrooms, labs, and offices during vacation times and on weekends, the volunteer-driven program was successful in reducing electricity use by 9.7 percent across all campuses combined—a savings of 3,970,664 kWh during fiscal year 2010-2011 when compared to 2008-2009.

"An eight percent reduction in energy use in such a short period of time is actually quite ambitious, so to have surpassed our initial goal in terms of electricity use is amazing," says BCIT Energy and Sustainability Manager Alex Hebert. "To reach our overall energy reduction target, we will need to reduce both electricity and natural gas use. Due to recent campaigns such as Light Savers we have been highly successful in reducing electricity use. Now it's time to tackle natural gas use."

### PROGRAMS

BCIT has more than 350 full-time, part-time, distance, and online learning programs:

- > Applied and Natural Sciences
- > Business and Media
- > Computing and Information Technology
- > Engineering and Technical Studies
- > Health Sciences
- > Trades, Vocational, and Apprenticeship

BCIT offers credentials in four broad categories:

- Certificates (associate, management, post-diploma, post-graduate)
- > Diplomas (technology, technical studies, trades training)
- Undergraduate degrees (technology, engineering, business administration, science, science in nursing)
- > Graduate degrees (master's)

### PEOPLE

- BCIT has approximately 46,500 full-time and part-time students, 2,250 faculty and staff, five campuses, and an annual budget of \$280.4 million
- > BCIT has more than 140,000 alumni
- Approximately 5,500 students graduate from BCIT each year

A high percentage of BCIT graduates find employment. In 2010:

- > The employment rate for certificate and diploma program graduates was 77%. There was an 88% employment rate for apprenticeship graduates, and a 95% employment rate for degree program graduates.
- > 93.9% were satisfied with their BCIT education.

Complete financial statements can be found by searching 'financial statements' at bcit.ca.

> The average annual salary was \$41,600 for certificate and diploma program alumni, \$62,400 for apprenticeship graduates, and \$64,480 for graduates of degree programs.

## **BOARD OF GOVERNORS**

July 2010

Michael R. McPhie – Chair President and CEO, Curis Resources Ltd

Antonio Gugliotta – 1st Vice Chair Executive, Vancouver Airport Authority

Pardeep Sangha – 2nd Vice Chair *Executive, PI Financial Corp* 

Rob Doman Executive, Waterstone Partners Inc.

Michael Gartner - Student Representative

Jordan Harris – Student Representative

Jim Laurence President and COO, Vanbots Construction

Margaret McFarlane Partner, BDO Dunwoody LLP

Taj Mitha Barrister and Solicitor

Carla Reid – Support Staff Representative *Supervisor, Accounts Payable, BCIT* 

Rick Roger Owner, RRoger Management Resources

Kevin Wainwright – Faculty Representative Program Head, Bachelor of Business Administration

#### **Ex-officio Members**

Don Wright President, BCIT

Robert Stevens – Chair, Education Council Associate Dean, Natural Resources School of Construction and the Environment

## 2010 - 2011

### Student Enrolment

<b>58.4% PART-TIME CERTIFICATE/DIPLOMA/UNDECLARED</b>
13% FULL-TIME APPRENTICE
12.4% FULL-TIME DIPLOMA/CERTIFICATE
10.3% FULL-TIME VOCATIONAL DIPLOMA/CERTIFICATE
2.7% PART-TIME DEGREE
3.2% FULL-TIME DEGREE

TOTAL NUMBER OF STUDENTS: APPROXIMATELY 46,500

### Sources of Institute Revenue

41% BC MINISTRY OF ADVANCED EDUCATION
31% TUITION AND FEES
7% INDUSTRY TRAINING AUTHORITY
5% ANCILLARY
4% INDUSTRY SERVICES
12% OTHER

TOTAL REVENUE: \$280.4 MILLION

#### Areas of Institute Expenses

65% SALARIES AND BENEFITS
8% DEPRECIATION
5% SUPPLIES
4% FEES FOR SERVICE
4% REPAIRS, MAINTENANCE
2% PROFESSIONAL DEVELOPMENT
2% STUDENT AWARDS
1% PRINTING, MARKETING AND PROMOTION
9% OTHER
TOTAL EXPENSES: \$270.3 MILLION



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