Shine Brighter

Sheridan

Annual Report 2011

Sheridan

Sheridan College Institute of Technology and Advanced Learning

Annual Report – 2010/11

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Sheridan College Institute of Technology and Advanced Learning

Annual Report – 2010/11

Message from Board Chair

I am pleased to submit the Sheridan College Institute of Technology & Advanced Learning 2010-11 Annual Report.   Highlights of the report include the advances made by Sheridan towards meeting its priority initiatives and enhancing operational performance while maintaining a sound financial position. It has been a pleasure to serve as Chair of the Board of Governors during this period, and I look forward to charting the college's progress and evolution in the years ahead.

Michael Cloutier
Chair

Message from President

I joined Sheridan as President and CEO in February, 2010, in time to oversee a year of important expansion and innovation in the college's history. The 2010-11 academic year saw an increase of 11.6% in full-time enrolment for a total of 17,620 students. Thanks to expanded international recruitment efforts, this number included 2,996 international students – an increase of 93% over the previous year.

To help accommodate current and projected growth, while also providing residents of Peel Region with more postsecondary options, we constructed a new campus in Mississauga's city centre, offering postsecondary and post-graduate business and newcomer programming for up to 1,760 students. The Hazel McCallion Campus is on track to open in September for the 2011 fall term.

Our focus on enhancing the student experience and supporting student success is reflected in the activities of Sheridan's Student Success Initiative, which was first launched in 2009. In the past year, a Student Retention Committee initiated several projects aimed at improving student retention rates. Their impact may be seen in the improvement of our Graduation Rate for 2010-11 to 72% - the highest in the GTA, and well above the provincial average of 64.2%.

The Graduation Rate for Sheridan's applied degrees of 79.5% reflects the strength of these programs, especially as compared to the GTA average for degrees of 66.9%. With two new degrees approved for launch in the 2011-12 academic year, Sheridan now offers ten applied degrees. With two more pending PEQAB approval and a further eight in development, we are well positioned to help meet the growing demand in the GTA for the bachelor's degree credential.

Jeff Zabudsky
President and CEO

VISION AND MISSION

The Sheridan Strategic Plan 2009-2014 was developed through a planning process that included an environmental scan and research that explored our strengths and weaknesses as perceived by stakeholders including faculty, staff, administration, business partners and graduates. Extensive consultation with these stakeholders was undertaken through open discussion forums, individual interviews and a series of meetings. A planning committee comprised of deans and senior managers met regularly to review the consultative output and ultimately create the elements that are incorporated into the plan.

The environmental scan took into account current and projected demographics, the changing nature of work, and capacity constraints. Sheridan serves the regions of Halton and Peel, both of which have experienced significant growth over the past 15 years, and are projected to continue to grow over the next few years, much of it from immigration. The changing nature of work as described in reports from a variety of sources indicates that innovation and creativity will be key to the province's continued economic well-being. And while the college system as a whole is challenged to meet the changing demographics and needs of the workplace, Sheridan is uniquely positioned to cater to an increasingly diverse workforce and to satisfy the demands of the creative economy.

Sheridan's Strategic Plan 2009-2014 states our mission as:

"To provide students of all ages with the knowledge and skills to thrive in a rapidly changing world,"

and our vision:

 "To be world class providers of innovative and creative learning."

Our mission and vision are supported by three goals:

1. Help students develop to their full potential.
2. Be a destination of first choice for applicants, students, employees and industry.
3. Benefit our communities socially and economically.

To achieve these objectives, we have identified several key strategic thrusts. These are outlined below.

More welcoming:

- Flexible and adaptable to meet the needs of our diverse community
- Match learners to the right learning opportunity
- Outreach to new Canadians
- Grow international activities
- Campus expansion and development

More supportive:

- Strengthen our student-first focus
- Build a sense of community and belonging
- Empower learning through digital access
- Streamline student processes and flows

More inspiring:

- Foster a creative community that inspires imagination, creativity and innovation
- Embrace flexible curriculum design and delivery
- Celebrate achievement and success publicly
- Empower learners to collaborate and express themselves
- Build ownership of values and strategy at all levels
- Foster spirit of outreach, philanthropy and service

More valuable experiences:

- Advance curriculum renovation and innovation
- Innovative applied research
- Foster global awareness and citizenship
- Promote environmental sustainability
- Provide more convenient service and program delivery
- Build strategic partnerships of value

Academic Innovation Strategy

Concurrent with the development and release of the Strategic Plan 2009-2014 was the creation of an Academic Innovation Strategy (AIS), designed to deliver on the academic commitments contained within the Strategic Plan. Subsequent to the publication of the AIS in the summer of 2009, a number of task forces were established to develop specific recommendations related to Applied Research, Creative Campus, Digital Learning Environment, Experiential Learning, Internationally Trained Individuals and International Education, and Student Success. The collective recommendations of those task forces were captured in Sheridan: The Creative Campus, which was published in September 2010 (see Appendix G). The recommendations contained therein outline how we plan to design and deliver curriculum and inform new learning outcomes.

REPORT ON PREVIOUS YEAR'S GOALS

Sheridan's 2010-2011 Business Plan outlined seven priority initiatives drawn from the Strategic Plan:

1. Curriculum renovation and innovation
2. Strategic enrolment management
3. Campus development and expansion

4. Expansion of international activities
5. New Canadians and re-skilling outreach
6. Expanding digital learning environments
7. Organizational effectiveness

A detailed description and status update follows.

1. **Curriculum renovation and innovation**

   Sheridan's Academic Innovation Strategy identified goals for the 2010-11 academic year which encompassed program development refinements, a framework for prioritizing programs and improvements to academic processes. The following advances took place in support of these goals:

   Registration - Sheridan will introduce a flexible timetabling environment for the Fall 2011 term that provides student-centred choices.   Students will be issued timetables in early August with a full course complement for which they are eligible, and will then be able to add courses, swap course sections or drop courses online before the semester begins.

   Degree Program Expansion - Sheridan has committed to maximizing our degree-granting capacity to help meet the demand for undergraduate degrees in our communities specifically and the GTA in general.   We announced two new degrees in December 2010 (Music Theatre and Photography). Two additional degrees are presently before the PEQAB Board for approval, and eight new degree proposals will be submitted this in the fall of 2011.

2. **Strategic enrolment management**

   Sheridan's full-time enrolment target for 2010/11 was 16,197 full-time students, representing an increase of 7.6%. Actual enrolment for 2010/11 was 17,620, an increase of 11.6%.

   Retention enhancement continues to be an important component of strategic enrolment management. In 2010/11, smoother access to general support services was encouraged through ongoing promotion of Sheridan's Student Advisement Centres, which offer advice and information regarding any aspect of the student experience. Orientation and other first-year program activities were expanded to improve connectivity to students in support of their successful transition to Sheridan.   In 2010, 75-80% of first year students attended Orientation events.   Sheridan achieved a 72% graduation rate in the 2010-11 KPI survey results, the highest rate of all the GTA colleges, and ahead of the provincial average of 64.2%.

3. **Campus development and expansion**

   A key goal identified in the 2010/11 Business Plan was the targeted opening date of September 2011 for a new campus in Mississauga. The new campus, officially named "The Hazel McCallion Campus" opened to receive its first cohort of students on September 6. Enrolment in the first year undergraduate business programs being offered at HMC had already reached capacity as of

March. In addition to first-year business undergraduate programs, a number of graduate certificate programs, as well as specialized language training for newcomers, are also being offered at the new campus. In June, the provincial government announced $60 million in funding to support the construction of a second phase which will accommodate an additional 3,500 full-time students, bringing total capacity to 5,260 when phase 2 is completed (targeted for 2014).

4. **Expansion of international activities**

   Sheridan increased international enrolments in 2010/11 by 93% over the previous year, for a total of 2,996 new and returning full-time international students. To provide enhanced support to the international student population, we launched a virtual community on the college's intranet to enable students easy access to a wide range of information and to encourage interaction among students.

5. **New Canadians and Re-skilling Outreach**

   Sheridan continued to explore new and unique ways to engage with our diverse communities. As one example, a translation function was added to the corporate website to allow prospective students and their families to access a range of information in their language of choice.

   In terms of re-skilling for unemployed individuals, Sheridan continued to participate in the Second Career program. For the audit year 2010-2011 (Terms Spring 2010, Fall 2010 and Winter 2011), we had 477 Second Career students enrolled in post-secondary programs and a further 18 enrolled in academic upgrading.

6. **Digital Learning Environments**

   Hybrid courses deliver curriculum through a blend of in-class and on-line learning with a ratio of 2:1, and are intended to provide more flexibility to our students. Approximately 50 courses are being finalized for delivery in the Fall and Winter Semesters of 2011/12; another 75 courses are scheduled for transition to a hybrid format during this next academic year.

7. **Organizational Effectiveness**

   Our focus for 2010/11 was on creating a more welcoming and more supportive environment for the Sheridan community. A number of initiatives were undertaken to advance this goal:

   o An inclusive cross-college group of senior administrators, the President's Council, was established by Sheridan's new President in early 2010 to work collaboratively on policy development and budget planning, an important step towards more integrated and cohesive college administration. A 3-year business planning framework was launched in 2010 that incorporates risk management, longer time financial planning and resource allocation modelling.

- o Sheridan committed to developing a 'green' action plan, and to that end created the Office of Sustainabiility in April 2011 to lead the development and implementation of an institutional sustainability plan.
- o Accessibility was identified as key to Sheridan's value of inclusiveness and diversity. A new position, the Organizational Accessibility Coordinator, was approved to work with all of the areas of the College as we implement the Accessibility for Ontarians with Disabilities legislation. This initiative builds on the work Sheridan staff have completed over the years of removing barriers so that disabled members of our community: students, employees, and visitors, are able to participate fully at Sheridan.
- o New policies on Workplace Harassment and new procedures on Workplace Violence were created this past year at Sheridan and the Workplace Violence Policy was reviewed. These policies and procedures ensure that the Sheridan environment in which we work and learn is supportive and respectful for all. A particular focus on supporting the victims of domestic violence in our employee group was initiated.

OPERATIONAL PERFORMANCE

Sheridan made significant progress in the past year on a number of key initiatives, including internationalization, student success, and advancement. A brief summary is provided below.

International activities:

Over the past two years, Sheridan has expanded its International Centre, adding new full-time staff and setting its sights on new international markets. Currently, India is our largest market, representing 70% of the international student population. In 2010, Sheridan launched or increased its recruitment activities in Asia, Latin and South America, Eastern Europe, the Middle East and the United States.

International enrolment almost doubled from 2009-10 to 2010-11, from 1,552 to 2,996.

Student Success initiative:

In 2009, Sheridan's Executive team made a significant commitment to reviewing and studying the student retention picture (current situation) and building effective strategies to enhance student progression and retention. A team of 47 faculty, staff, administrators and students, with cross college representation formed the Student Retention Committee. After significant research, a number of initiatives were identified and over the last two years, several pilot projects have been developed and implemented, with a focus on new and first year students and aimed at improving new student adjustment, first semester student retention, student progression to semester two and enhancing academic performance.

Initiatives included:

1. **"First Year Experience" Program**

- Pilot audience: The Child and Youth Worker Program (182 students).
  Phase one outcome:
- 5.2% increase in the number of first semester students who progressed to semester 2 of the program (increase from the prior year)
- 5.7% decrease in the number of first semester student who dropped out prior to semester 2 (*meaning withdrawing from the College*)
- An improvement in academic performance as seen through semester one cumulative term GPA distribution with an increase in students falling into the top GPA grade range and a decrease in the lowest GPA range.

2. **Two Early Warning Systems Pilot Programs**
   Faculty Identified Model:
   - Pilot audience: All Computing programs at Trafalgar and Davis
     Phase one outcome:
   - 4% increase in the number of first semester students who progressed to semester 2 of the program (increase from the prior year)
   - 2% decrease in drop outs

   Student Identified Models:
   - Pilot audience: First semester Business Administration programs at Davis (404 students)
     Phase one outcome:
   - 4.6% increase in the number of students who progressed from semester one to semester two (compared to the prior academic year)
   - 2.9% decrease in the number of students who dropped out.

3. **Enhanced and tailored preparation, new student orientation programs and transitional support services for Mature Re-careering students**
   - Launched in August 2010 and again in December: 700 new students participated with very high satisfaction levels and students reporting positive impact (on line surveys)

4. **Enhanced and tailored preparation, new student orientation programs and transitional support services for International students**
   Year of external and internal research, Survey of all current international students, focus groups with all Faculties, Student Services staff. Pilot initiatives to launch in September 2011.

5. **Defining Student Success at Sheridan**

   Creating a Sheridan definition of student success was an essential first step to building long term student success strategies, operational plans to support them, to effectively measure and evaluate impact of efforts, build clear accountability measures;. A coordinated outreach plan was conducted and, with the input of over 550 faculty, staff, administrators and students, a definition was developed. This definition serves as Sheridan's guiding principle…its beacon.

Definition of Student Success

Sheridan recognizes that Student Success is unique to each individual student. Our shared definition encompasses the following:

- *Identifying or discovering career and personal goals and direction*
- *The development of the whole person which includes intellectual, personal and social development*
- *An ignited passion for learning*
- *The mastering of skills and capabilities in the student's chosen discipline*
- *Experience a journey of incremental milestones and successes*
- *Academic and professional achievement and a sense of personal accomplishment, effectively prepared for the next steps beyond Sheridan*

Fundraising:

During the 2010/2011 school year, Sheridan disbursed $2.1 million in student awards, scholarships and bursaries through the generosity of our donors. Sheridan's endowment fund, with matching support from the Provincial Government, now totals $39 million and provides a healthy return for student bursaries each year. Year-end academic award ceremonies recognize and reward student achievement and are presented by industry and community partners who support this initiative.

Sheridan hosted two major fundraising events in 2010-11. The Big Picture Gala took place on October 28, 2010 at the Mississauga Convention Centre, during which the college recognized leading organizations and community groups with our Big Picture Awards. The event attracted over 800 guests and raised $185,000 in support of Sheridan students and programming.
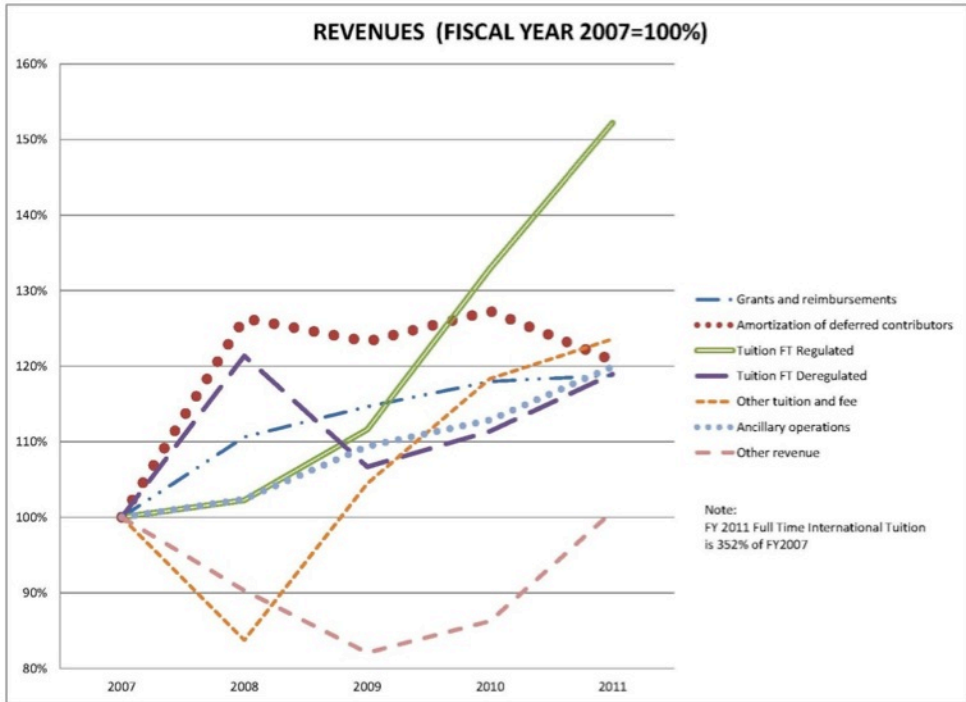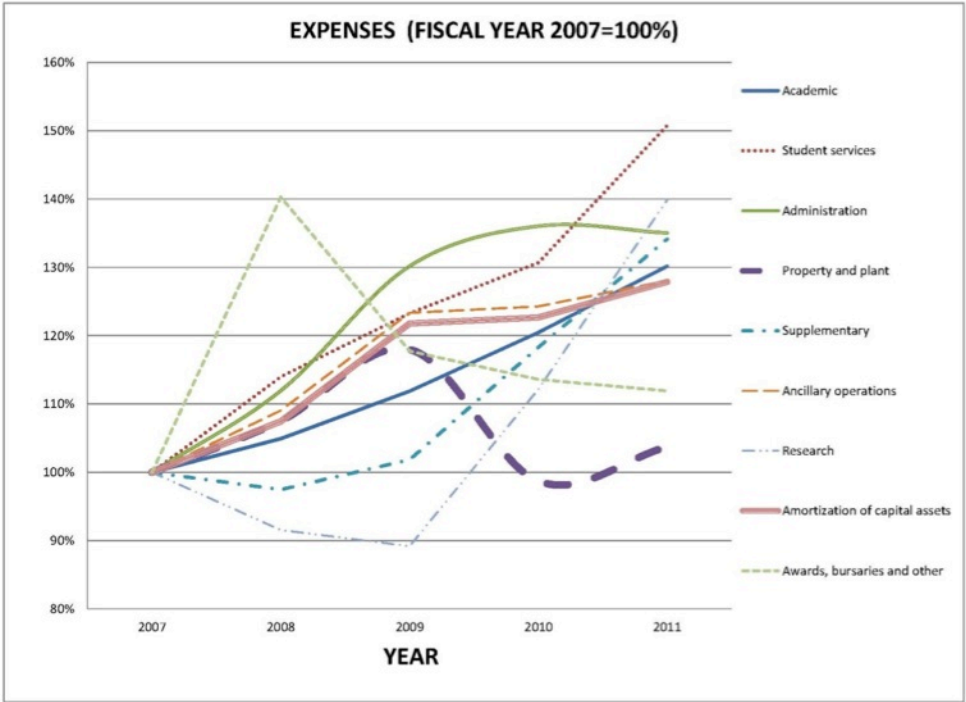
On February 12, 2011, Sheridan hosted Mayor Hazel McCallion's 90th birthday celebration, at which it was announced that the college's new Mississauga campus would be named in the Mayor's honour. Proceeds from the event, totaling more than $185,000, will benefit the new campus.

ANALYSIS OF COLLEGE'S FINANCIAL PERFORMANCE

Sheridan College Institute of Technology and Advanced Learning

FIVE YEAR FINANCIAL COMPARISON

FISCAL YEAR	2007	2008	2009	2010	2011
REVENUE					
Grants and reimbursements	$ 81,761,671	$ 90,455,706	$ 93,750,308	$ 96,452,285	$ 97,141,023
Amortization of deferred contributors	$ 9,911,818	$ 12,524,111	$ 12,216,925	$ 12,617,562	$ 11,972,569
Tuition FT Regulated	$ 17,963,598	$ 18,372,080	$ 20,053,838	$ 23,880,378	$ 27,343,262
Tuition FT Deregulated	$ 9,313,360	$ 11,303,678	$ 9,935,713	$ 10,374,466	$ 11,079,573
Tuition FT International	$ 5,036,247	$ 4,874,214	$ 5,239,408	$ 8,605,050	$ 17,745,699
Other tuition and fee	$ 10,843,300	$ 9,080,608	$ 11,328,155	$ 12,832,951	$ 13,401,717
Ancillary operations	$ 10,759,707	$ 11,016,366	$ 11,770,085	$ 12,145,384	$ 12,904,562
Other revenue	$ 20,674,112	$ 18,671,778	$ 16,969,272	$ 17,833,338	$ 20,832,549
	$ 166,263,813	$ 176,298,541	$ 181,263,704	$ 194,741,414	$ 212,420,954
EXPENSES					
Academic	$ 78,594,003	$ 82,472,469	$ 87,921,862	$ 94,681,155	$ 102,312,854
Student services	$ 13,370,616	$ 15,237,697	$ 16,482,258	$ 17,475,699	$ 20,155,383
Administration	$ 23,782,419	$ 26,624,545	$ 30,958,079	$ 32,352,636	$ 32,110,102
Property and plant	$ 11,364,481	$ 12,221,123	$ 13,407,161	$ 11,216,411	$ 11,787,127
Supplementary	$ 2,169,716	$ 2,114,669	$ 2,209,817	$ 2,567,025	$ 2,910,417
Ancillary operations	$ 6,945,820	$ 7,573,667	$ 8,567,360	$ 8,632,466	$ 8,894,682
Research	$ 1,536,077	$ 1,406,315	$ 1,370,202	$ 1,723,055	$ 2,148,566
Amortization of capital assets	$ 9,160,017	$ 9,841,650	$ 11,155,103	$ 11,235,975	$ 11,712,985
Awards, bursaries and other	$ 5,963,762	$ 8,366,823	$ 7,021,609	$ 6,774,215	$ 6,673,938
	$ 152,886,911	$ 165,858,958	$ 179,093,451	$ 186,658,637	$ 198,706,054
Excess of revenue over expenditures	$ 13,376,902	$ 10,439,583	$ 2,170,253	$ 8,082,777	$ 13,714,900

EXPENSES (FISCAL YEAR 2007=100%)

Legend:
- Academic
- Student services
- Administration
- Property and plant
- Supplementary
- Ancillary operations
- Research
- Amortization of capital assets
- Awards, bursaries and other

REVENUES (FISCAL YEAR 2007=100%)

Legend:
- Grants and reimbursements
- Amortization of deferred contributors
- Tuition FT Regulated
- Tuition FT Deregulated
- Other tuition and fee
- Ancillary operations
- Other revenue

Note:
FY 2011 Full Time International Tuition is 352% of FY2007

CAPITAL PROJECTS

Over the past five years, Sheridan has invested in a number of campus expansions to support our continued enrolment growth, better serve our communities and enhance the student experience. These have included the opening of the Centre for Healthy Communities at the Davis Campus (2007); the Learning Commons at the Trafalgar Campus (2008); the Library Learning Commons at the Davis Campus (2009); and the Hazel McCallion Campus (2011).

SUBSIDIARIES AND FOUNDATIONS

Sheridan College Foundation:

Sheridan College Institute of Technology and Advanced Learning is a registered charitable organization as designated by the Canada Revenue Agency. All charitable activities are carried out and recorded under BN/Registration Number 107976565RR0002. In addition, Sheridan College Foundation is a registered charitable organization as designated by the Canada Revenue Agency. BN/Registration Number 876773227RR0001.
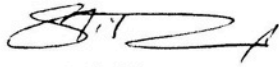
Ongoing programs:
we provide academic awards, scholarships and bursaries. We do fundraising for capital projects. We offer post secondary educations (continuing education).

Financials:

THE SHERIDAN COLLEGE FOUNDATION

BALANCE SHEET
DECEMBER 31, 2010

ASSETS:

$ NIL

LIABILITIES:

Accounts Payable
Sheridan College

$ NIL

FUND BALANCE

Fund (Deficiency) Balance

$ NIL

June 7, 2011

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THE SHERIDAN COLLEGE FOUNDATION

NOTES TO THE FINANCIAL STATEMENTS
DECEMBER 31, 2010

1. Significant Accounting Policies:

    The Financial Statements of The Foundation are prepared in accordance with accounting principles as outlines below:

    Revenue: Donations are accounted for on a cash basis. No accruals are made for monies pledged but not yet received.

    Deferred Costs: Expenses incurred for supplies and materials are deferred until they are used and/or distributed at which time all of the costs are expensed.

2. **Income Taxes:**

    The Foundation is a registered charity under the Income Tax Act and accordingly is exempt from income taxes.

June 7, 2011

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Appendix A: Multi-Year Accountability Agreement

Click the link below to view the 2009-10 Multi-Year Accountability Agreement Report Back:

http://bit.ly/pCvcyQ

Appendix B: Audited Financial Statements

To view the audited financial statements for the year ending March 31, 2011, please click on the link below:

http://bit.ly/t6ZmvJ

Appendix C: KPI Performance Report

Click the link below to view the 2011 KPI Survey Results Report:

http://bit.ly/phJumZ

Appendix D: Summary of Advertising and Marketing Complaints Received
NIL complaints received

Appendix E: Institutes of Technology and Advanced Learning (ITAL) Reports

Appendix E: i
Sheridan continues to offer a variety of post-secondary credentials, including one-year certificates (21), diplomas and advanced diplomas (58), applied degrees (10), collaborative degrees (5), and graduate certificates (25).   Enrolment data for the years 2004-2010 is provided below:

Sum of annual students*							
	2004	2005	2006	2007	2008	2009	2010
APDEG	555	804	1,042	1,063	1,080	1,178	1,303
ONCLAVDP	2,982	3,073	3,827	4,464	5,056	5,456	5,642

ONCLCERT	1,134	1,355	1,319	1,300	1,253	1,369	1,596
ONCLDIPL	5,765	6,649	6,099	5,737	6,083	7,093	8,349
ONCLGRCR	528	575	573	623	622	695	731
Grand Total	**10,964**	**12,455**	**12,860**	**13,186**	**14,094**	**15,790**	**17,620**

(*Full time head count only; includes joint programs)

Through the School of Continuing Education, Sheridan serves approximately 35,000 adult learners each year with intakes in the fall, winter and spring/summer terms. Offerings include a wide range of credentials and professional designation programs, over 200 online programs and courses, and individual courses in business, computer studies, manufacturing technology and trades, communication, education and liberal studies, and health and wellness.

Appendix E: ii

Sheridan is an authorized training delivery agent for the following trades:

Precision Machining and Tooling Trades including:
Tool and Die Maker/Tooling, Tool Maker, all levels of training.
General Machinist, all levels of training.
Mould Maker, Pattern Maker, and Machine Tool Builder and Integrator common levels of training.
Construction and Maintenance Electrician all levels of training.
Industrial Electrician common levels of training.
Industrial Mechanic Millwright all levels of training.
Construction Millwright, common levels of training.

2010-11 enrolment in all skilled trades programs was 618 students.

Pathways to Apprenticeships

Sheridan's School of Skilled Trades personnel work closely with the various industries that support apprenticeship training and consequently receive regular inquiries from employers who want to hire an apprentice. However, it is quite apparent that the need for previous experience is a firm prerequisite to hiring. In order to satisfy these industry requirements, Sheridan offers very successful post secondary programs in several trade areas including:

Mechanical Techniques-Tool and Die Maker, which creates pathways to all precision machining and tool trade areas.
 Electrical Techniques,
Welding Techniques,
Mechanical Techniques-Plumber

New for 2011: Mechanical Technician-Tool Maker Coop Diploma Apprenticeship, (CODA). In this program students earn a college diploma as well as completing all of the in-school training components for the Tool and Die Maker/ Tool Maker apprenticeship program.

All of the above programs provide excellent pathways not only into apprenticeship opportunities, but also carry credits toward other post secondary programs within the Faculty of Applied Science and Technology.

Industrial Mechanic Millwright Pre Apprenticeship
(Sponsored by MTCU's Apprenticeship branch)
This unique program is designed to help overcome the barriers encountered by some applicants to college skilled trade or apprenticeship programs, e.g.:

- Applicants who lack the minimum academic requirement.
- Applicants wanting to study the apprenticeship in-school training component without first having a job and being registered as an apprentice.

During the first twenty four (24) weeks of training, intense academic upgrading is an integral part of the program, allowing successful students to gain their grade twelve (12) equivalency thus permitting them to become apprentices.

Graduates of the pre apprenticeship component (first 24 weeks), are able to take the level one (1) apprenticeship in-school program. They are registered as apprentices through a local industry committee (LIC).

Graduates of the apprenticeship portion are placed in related work positions with industry.

Sheridan's record for work placements and subsequent apprenticeships derived from the above program puts the college into an enviable position as an apprenticeship authorized training delivery agent.

School-College Work Initiatives

In 2010-11 350 Peel District School Board and Dufferin-Peel DCSB students earned credits for one, two or three dual-credit courses in Sheridan skilled trades Ontario college certificates.

In May 2011, 950 grade 7/8 students from Peel and Halton school boards attended a day of trades and technology workshops at Sheridan's Davis campus.

Appendix E: iii
Please see Appendix C: KPI Performance Report

Appendix E: iv

SHERIDAN APPLIED RESEARCH AND INNOVATION

Sheridan College enjoys a reputation for innovation and creativity, based in large part on our applied research leadership in animation, interactive digital media, and elder care. Our Research and Innovation vision is that we *"will be an integral component of Sheridan academic programs, building expertise and focusing on creative problem solving through innovative research projects and collaborative partnering".*

Our applied research and innovation initiatives are built on the foundation of three major organizational pillars:

• **Differentiation –** By forming partnerships with business and industry to acquire government grants and engaging academic expertise to lead research activities, Sheridan has secured its place as a leading-edge institute of technology and advanced learning (ITAL).

• **Academic Advancement –** By enhancing unique bodies of knowledge resident in the institution, training students on the latest advances and encouraging faculty to continue to lead investigations in these areas, Sheridan has developed several niches in which we are recognized as a credible authority.

• **Building Partnerships –** Owing to a successful track record in meeting project objectives on time and on budget, Sheridan has been successful in creating partnerships with funding agencies (CFI; NSERC; SSHRC; CIHR; FedDev; OMDC; OCE; MRI); business and industry; government (local, regional, provincial and federal); and colleges/universities across Canada.

Sheridan faculty researchers and students conduct applied research to solve practical, real-world challenges to advance the goals of our communities. We develop research partnerships to solve industry problems, resulting in measurable economic benefit and enriched curriculum.

Highlights of applied research and innovation activity that illustrate our progress in realizing our vision during FY 2010/2011 are outlined in the following report.

A) **Industry Collaboration through Major Grant Awards**

• **NSERC –** Sheridan has two NSERC CCI grants that have engaged industrial and community partners. Work to date has led to the engagement of a large number of students and faculty from across the College. Programs of research are in support of the Screen Industries Research and Training (SIRT) Centre and the Sheridan Elder Research Centre (SERC) described in Section D.

• **FedDev Ontario –** Sheridan is currently engaged in 15 projects funded through the new FedDev Ontario Applied Research and Commercialization (ARC) Initiative. Early results have exceeded expectations with one company already hiring two graduates as a result of the association.

• **OMDC –** Sheridan has received its second funding award from the OMDC Creative Cluster Partnerships Program in support of SIRT; the current award is to establish a Regional Training and Consulting Unit at the Centre.

• **CIHR –** A "first" for a Canadian college, SERC completed a CIHR Catalyst grant that engaged faculty affiliated with Sheridan's Music Theatre Program to explore the potential for dance to encourage healthy

aging. This included dance classes bringing nearly 60 adults ages 55 and older from the community to Sheridan on a weekly basis during the summer of 2010.

• **SHARCNET –** The Shared Hierarchical Academic Research Computing Network (SHARCNET) awarded its first College Research Chair to a Sheridan professor (Dr. Edward Sykes) in a two-year pilot launched 2009 through to 2011. Highlights included hosting the SHARCNET Summer School for three consecutive years.

B) Academic and Community-based Applied Research Collaborations

• **CFI Inclusive Design Institute (IDI) –** Sheridan is a partner in a regional CFI grant to establish a regional Inclusive Design Institute to investigate how information communication and technologies can be designed from the beginning to respond to diverse audiences' needs. Partners include: OCAD (lead), UofT, York U, Ryerson, UOIT, Seneca and George Brown. Equipment from this grant will support projects that will be driven out of Sheridan's newly established Creative Enterprise Centre (CEC). The CEC will support ideation, problem solving and AR projects generated from IDI, FedDev, VDI, Mobile Applications Development and Sustainability initiatives. The intent of the space is to provide the tools and facilities to allow: collaboration and creativity to take place amongst all AR projects; flexible work spaces for team interaction; equipment to allow project work to be done by students and faculty; private networked stations; and a room for demonstrations and industrial presentations.

• **MRI Research Excellence Fund University of Waterloo 2D/3D Stereoscopic Production –** Sheridan's SIRT Centre and the University of Waterloo Institute for Computer Research are collaborating on a five-year 2D/3D Stereoscopic Production/Multi-platform Production and Previsualization research and innovation initiative focused on providing Ontario production companies and creators with technological innovations and best practices to help them produce content for multiple types of delivery (film, TV, gaming, interactive, mobile).

• **2020 Media Futures –** 2020 Media Futures is an initiative of the OCAD Strategic Innovation Lab, funded by OMDC, with Sheridan (SIRT), York, OCE, and the National Film Board as partners. Horizon scanning/foresight planning has been completed on the factors affecting content production in the Year 2020.

• **3D FLIC (York University's Industry Academic Partnership)** – SIRT is involved in a 3D database project to develop an online source for 3D stereoscopic news and resources in Ontario. This SIRT website initiative aims to serve media industries with a comprehensive, accurate, searchable, updateable public online database of information about the Ontario S3D community.

• **I.A.T.S.E. 667 –** SIRT has launched a formal collaborative partnership with I.A.T.S.E. Local 667 to train its members in new digital technologies and further enhance Ontario's status as a hub of innovation and excellence in global entertainment production. This included development of a prototype for a regional training organization for the film, television and gaming industries.

• **Region of Halton Partnership –** Multi-year agreement with SERC and Halton Services for Seniors to conduct applied research related to the health care industry. Recently completed one phase of the CIHR funded dance project at Bonnie Place, a supportive housing site operated by the Region. Outcomes: Data collected and analysed; report to be distributed to stakeholders at Region of Halton.

• **Acclaim Health Partnership –** Multi-year agreement to operate an Alzheimer Day Program and conduct related research and student work placements at SERC.

• **Niagara College Partnership** – Developing a SERC–Niagara College partnership, including Niagara contracting SERC in 2010/11 to conduct two PD workshops (Trends in Aging and Applied Research in the Field of Aging) for NC faculty and administrators held at Niagara.

C) Integrating Applied Research into Curriculum

• **AIS Applied Research Steering Subcommittee –** The AIS AR Steering Subcommittee was convened in 2010 to implement recommendations 12, 13 and 14 of the Academic Innovation Strategy. The subcommittee has developed terms of reference which incorporate these recommendations. The subcommittee has also committed to supporting two workshops that would focus on research ethics and research methodology. The committee is reviewing models of research that would incorporate client-based and funded projects into curriculum outcomes and credential requirements. In March, the committee approved the adoption of the Applied Research Task Force White Paper definition of Applied Research and will seek its placement in Sheridan policy. The subcommittee also provided documentation to facilitate program review and new program development in order to embed research competencies in degrees and advanced diplomas.

• **Previsualization and Virtual Production Conference –** A two-day previsualization conference held at Pinewood Toronto Studios in February exceeded expectations with 180 participants. A review is under way on how to best embed outcomes into curriculum.

• **Mature Consumers Studies™ Continuing Education Online Certificate –** Curriculum development supported by SERC, this new online certificate offers critical insight and comprehensive analysis of the aging population phenomenon – the most significant influence on social policy and marketing since WWII surpassed only by the Digital Revolution. Geared to business and industry, marketers, product/program designers and public sector professionals who are motivated to respond to the needs and wants of this rapidly accelerating older segment.

D) Applied Research and Innovation Centres of Excellence Initiatives

Sheridan Elder Research Centre (SERC)
http://serc.sheridaninstitute.ca/

The Sheridan Elder Research Centre, opened in September 2003, is a unique environment for the conduct of applied research into areas of practical concern and immediate relevance to older Canadians. SERC develops innovative approaches and creative interdisciplinary partnerships to focus on enhancing the lives of Canadian seniors.

In the next few generations, the worldwide proportion of older persons will increase ten fold to 1 in 4. By 2021, Ontario will be home to close to three million seniors – more than double the number in 1998. With this rate of growth, the need to translate applied research into practical strategies and approaches that meet the challenges and opportunities presented by this imminent boom is critical.

The goal of SERC is to identify, develop, test and support implementation of innovative strategies that improve the quality of life for older adults and their families, and to do this through applied research.

SERC'S 2010/2011 applied research and innovation projects include:

Accessible Internet Shopping: Reaching a Shifting Demographic – Well.ca is Canada's largest online seller of non-prescription pharmacy products. However, they have difficulty reaching older adults/caregivers as customers. In partnership with SERC and a faculty member from the Faculty of Business, this project will determine the best ways for Well.ca to reach this demographic and expand their customer base.

Differentiated Computer Software Needs in an Aging Population – This project succeeded in meeting two challenges facing PointerWare Innovations, Ltd. as they approached the development of new software by surveying and conducting usability testing sessions with computer users at SERC.

Life-Long Learning: Technology and Game Use Among Older Adults – In this project, we explored three key issues for retirement homes seeking to incorporate brain fitness activities into their recreational programming. This research has laid the groundwork for the development of a cognitive enhancement activity appropriate for the residents of Schlegel Seniors Villages.

'Smemories' – Collaborative research with Niagara College and industry partner Olson Food Concepts achieved its two goals: to establish the favourite smells of adults ages 60 and over, and to determine the role of food aromas in inducing positive memories and encouraging greater health.

SERC Crystal Memories™ Software Project – Crystal Memories™ is software conceived by SERC to be used for reminiscence therapy with older adults suffering from dementia, as well as any older adult seeking to catalogue and share their memories with family and friends. 4FoldIT Solutions, a group of four Sheridan students in the Systems Analyst program, have worked with SERC to develop Crystal Memories from a CD-ROM program to a web-based program. This web-based program can be accessed from any Internet connected computer around the world, including mobile devices, and allows the user to upload images and write stories about those images, organized into categories. Crystal Memories™ is unique because it is extremely simple, making it appropriate for use by adults with dementia and older adults with limited computer expertise.

Screen Industries Research and Training Centre (SIRT)
http://www.sirtcentre.com/

The Screen Industries Research and Training Centre (SIRT) is rapidly gaining recognition as a world class collaboration centre that brings all stakeholders – government, post-secondary institutions, industry – to the table. This unique industry/academic technology innovation centre was established by Sheridan College at Pinewood Toronto Studios in the heart of Toronto's film and television studio district in 2009. Applied research and professional development areas include stereoscopic 3D (S3D) production, virtual production, and digital workflow. Highlights include a S3D industry demo presented for Her Majesty Queen Elizabeth II in July 2010, as well as an interactive virtual camera controller developed at SIRT for real-time S3D previsualization.

Sheridan's production expertise and innovation supports the development of technologies and practices that will provide a strong competitive advantage to Ontario's screen-based industries.

Research, innovation, commercialization, and knowledge dissemination/training at SIRT focuses on providing Ontario's production companies and creators with technological innovations and best practices that will help them produce content for multiple types of delivery including film, television, gaming, interactive, and mobile. 2010/2011 applied research and innovation projects include:

Previsualization and Virtual Production Technologies and Workflow Evaluation Project – A previsualization and virtual production project was carried out in conjunction with Autodesk Media and Entertainment, with the shoot taking place in the Summer of 2010 and post-production occurring over the latter half of 2010. This was a partnership with Autodesk's Virtual Production consulting team which involved preparation for shooting of a five-minute short dramatic script, previsualization and virtual production of the drama using SIRT's motion capture facilities, and post-production finishing and evaluation. This two-person drama took place in a single computer generated location and was a completely computer generated production in the end.

Real-Time On-Set Previsualization of Digital Special Effects Project – SIRT is in the process of developing a novel on-set production workflow for digital visual effects such as fire, smoke and water using real-time previsualization techniques in a 3D environment based on the Unreal game engine. Houdini, from Side Effects Software, is being used as the content creation, digital effects, and final rendering tool. The key components of this on-set previsualization workflow include the development of digital assets, including locations/sets; film equipment, including cameras; digital effects suitable for real-time visualization; and the creation of custom software linkages between motion capture equipment, the Unreal game engine, and the Houdini software platform.

Virtual Lens Test Project – This project addresses the need to replicate real-world cameras in 'Cg' environments. It involves a comparison of the framing and other lens features of real-world camera lenses to those used on the Cg cameras in Autodesk's MotionBuilder, one of the standard previsualization softwares. MotionBuilder, which is based on a game engine, is commonly used as the host for Cg environments, characters and cameras in the previsualization process. The project is also concerned with the language of cameras and lenses given the increased collaboration between cinematographers and visual effects artists as part of the previsualization process. Researchers and industry partners are identifying the correlation between camera and lens terminology used by live-action cinematographers and visual effects/animation artists in order to facilitate this collaboration.

Centre for Advanced Manufacturing and Design Technologies (CAMDT)

This Davis Campus facility, along with the Centre for Sustainable Manufacturing (CSM), was established to meet the demand in the manufacturing sector for graduates with a broad array of advanced technical and management skills. The Centre is a unique collaboration between Sheridan, provincial and municipal governments, and industry. 2010/2011 applied research and innovation projects include:

AR Stream Projects
• **Visioning System –** Develop generic, programmable, adjustable system for automated sorting and counting of parts of various shape and size.
• **Clothing Sorting –** Automate sorting of donated clothing into bundles.
• **Redesigned Straightening System –** Redesign industrial process so operator does not have to manually transfer straightened stock.

• **Design of Customizable Window Assemblies** – Design of multi-functional corner pieces and horizontal/vertical extrusions for the express purpose of being able to design and assemble custom sliding window assemblies.

OCE Connections Projects
• **Highway Wind Energy Generation System** – Production of a basic prototype to allow performance testing for a next round of technical development.
• **Lighting Technology Validation Trials** – Produce third-party, independent validated field trial of new digital ballast technology for HID lighting.
• **Real-time Sensor Data Visualization** – Link browser-embedded visualization object to real-time sensor data feeds from buildings.
• **Application Development for GPS Fleet Tracking** – Develop applications to report and track GPS data from fleets.
• **Odour Reduction from Off-Farm Biogas** – Research techniques for reducing odour from biogas feedstocks.
• **Sourcing Organic Biogas Feedstocks** – Identify organic biogas feedstock materials from grocery stores.
• **Perennial Energy Crops as Vegetated Buffers** – Examine potential for energy production crops to be used as vegetated buffer strips around the margins of agricultural production area.
• **Automated Production of ASHRAE 2 Energy Audit Reports** – Produce system to automatically populate audit reports to ASHRAE Level II from data gathered at sites.
• **Facility Assessments** – Assessment of energy, water, waste and process at industrial and commercial facilities to determine opportunities for cost savings.

Mobile Applications Development

Sheridan is an international leader in mobile applications development. Sheridan is also embarking on a new degree entitled *Bachelor of Applied Computer Science in Mobile Computing,* with emphasis on Mobile Applications Development and Wireless Technologies. The degree, anticipated to start in 2012, will provide leading-edge mobile applications development knowledge and skills for students; engage faculty and increase the research capacity in this field; and increase the number of highly qualified personnel capable of performing high calibre applied research with SMEs in the mobile computing sector. Related applied research activity in 2010/2011 included:

• **'Glasses Free' 3D Game at Ontario House Garners Publicity Value** – A celebrated exhibition of Ontario college research and innovation made it to the world stage when Sheridan created the first ever real-time 'glasses free' 3D game as a featured attraction in the Ontario House Pavilion at the 2010 Winter Olympics in Vancouver. Sheridan's strategically dedicated staffing resources to develop and execute a communications plan to promote this historic accomplishment contributed to $1.4 million in publicity value for Ontario. Over 70 local, national and international media outlets covered Ontario House; the national print coverage alone was circulated to nearly seven million people and reached an audience of almost 17 million. Developed with Toronto-based Spatial View for the Ontario Ministry of Tourism and Culture, the Sheridan 'IC3D' Game is an interactive application where players used BlackBerry® smartphones as controllers to assemble puzzles featuring Ontario tourist attractions displayed glasses free on 3D screens.

• **3D Mobile Application for Aerospace Industry Project** – Sheridan collaborated with Toronto-based Spatial View Inc. to create an interactive real-time 3D application using CAD models provided by Goodrich

Corporation's Landing Gear business, a leading supplier of integrated landing gear systems to the aerospace industry headquartered in Oakville, Ontario. The application, which debuted at the June, 2010 "*On the Wings of Innovation*" conference in Windsor, Ontario, uses Apple iPhones® to manipulate aircraft parts that are displayed in 3D without the need to use glasses. The models can be displayed on a large screen and the visual information, along with technical specifications, can also be ported to a mobile device, thereby creating a real-time 3D training or product manual that can potentially eliminate the need for outdated 2D paper-based manuals, along with their inherent limitations.

• **iPhone Application for MPP –** An iPhone application was developed by Sheridan for Kevin Flynn as an innovative means to connect the Oakville MPP to his constituents. The application allows users to view important community news and photos and learn about the MPP's experiences through his blog.

High Performance Computing

HPC (High Performance Computing) is the use of high-end computing resources (computers, storage, networking and visualization) to help solve highly complex problems, perform business critical analyses, or to run computationally intensive workloads that are in scale far beyond the tasks that could be achieved on today's leading desktop systems. 2010/2011 initiatives included:

• **Research in High Performance Computing: John the Ripper** – Password cracking algorithm in parallel using MPI on SHARCNET. Results published in international journal: Sykes, E. R., Lin, M., Skoczen, W. (2011). MPI Enhancements to John the Ripper, High Performance Computing Symposium (HPCS2010), Journal of Physics: Conference Series

• **Human Computer Interaction (HCI) Research Project: Intelligent Interruption Detection Algorithm –** Conducting full experiment using Neural Networks, which are scalable through the use of MPI on large scale cluster supercomputers. A prototype for Model of Attention has been designed and developed. SHARCNET resources are being used to accelerate the development process and refinement of the model.

Visualization Design Institute (VDI)
http://www.visualization.ca/

Sheridan's Visualization Design Institute (VDI) has led in innovation in the field of computer visualization specializing in deploying game technologies in 3D environments. Since its inception in 1999, the Institute's professional team has undertaken more than 30 projects from a range of sectors including: e-learning, health, bio-tech, municipal infrastructure and all genres of gaming from Web 2.0 through 4D environments that integrate 3D scanned objects and cultural artifacts.

• **Clinical Schizophrenia Research Virtual Reality Project –** Developed a Virtual Reality (VR) application that simulates a city environment with dynamic options for navigation and will be used in conjunction with a functional Magnetic Resonance Image (fMRI) device. The goal of the application completed in February 2011 is to provide an environment that will facilitate the assessment of participants' cognitive and behavioural functions while interacting with components in a multi-block VR city.

Recently VDI personnel have applied their visualization expertise to curriculum development.

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Appendix F:

BOARD OF GOVERNORS 2010/2011

Michael Cloutier, Chair
2005/09/01 – 2011/08/31

Rob Filkin, Vice Chair
2007/09/01 – 2013/08/31

Sumon Acharjee, Administrative Staff
Representative
2009/09/01 – 2012/08/31

Princess Alexander
2010/09/01 – 2013/08/31

Emma Alguire, Student Representative
2010/09/01/- 2011/08/31

Heather Angel
2006/09/01 – 2012/08/31

Kathryn Bouey
2006/03/22 – 2011/08/31

Jim Grieve
2005/09/01 – 2011/08/31

Bob Kaye
2006/10/18 – 2012/08/31

Paul Khangura, Support Staff Representative
2009/09/01 – 2012/08/31

Syed Mir
2009/09/01 – 2012/08/31

Bob Pesant
2008/09/01 – 2012/08/31

Randy Pilon
2009/09/01 – 2012/08/31

Joyce Wayne, Faculty Representative
2009/02/01 – 2012/08/31

Shelley White
2009/09/01 – 2012/08/31

Ashhar Warsi, Student Assessor
2010/09/01 – 2011/08/31

Jeff Zabudsky, President & CEO
Steven Parfeniuk, Treasurer
Elizabeth Benson, Secretary

Appendix G:

Sheridan: The Creative Campus

Click on the link below to view the report:

http://bit.ly/pieDoW