

Connecting Teachers

A Regional Planning Team

SCWI Project Number 9–2

REVISED PROPOSAL

In Response to
SCWI's Request for Proposals
Phase 9
April 25, 2005

Submitted September 15, 2005

EXECUTIVE SUMMARY

Introduction

Connecting GTA Teachers (CGTAT) provides the infrastructure for the communication and planning required to develop and sustain relationships between colleges and school boards. It serves as the coordinating body for all SCWI activities in the Greater Toronto Area.

Summary of Proposal

This application for funding encompasses three main SCWI programs:

- SCWI Category 1 – Regional Planning Team
- SCWI Category 2 – Regional Forums
- SCWI Category 3 – Major Projects

Under **Category 1**, *CGTAT* is proposing to continue with the structure of the Region Planning Team and build upon the successes of its activities and initiatives.

Under **Category 2**, *CGTAT* is proposing a number of Regional Forums varying in size and scope. Some of the topics proposed include:

- Communications Skills—A follow-up to our two, Phase 8, Regional Forums
- Technology
- Replication of the Portfolio Assessment Forum
- Career Awareness for Parents, Teachers, Students and Administrators

Under **Category 3**, *CGTAT* is proposing three new SCWI Major Projects:

1. SCWI Pilot A – *College Mathematics Project (CMP)*, Seneca College
2. SCWI Pilot B – *STEPS to College*, Seneca, Toronto DSB, and others
3. SCWI Pilot B – *School to College Transition Program*, Sheridan and Dufferin-Peel CDSB

SCWI Pilot A – The **College Mathematics Project (CMP)** will analyze ‘hard’ data to investigate why student success rates in first year college technology/mathematics courses are often unacceptably low. The project can be replicated by other colleges/boards and will produce factual evidence for future initiatives leading to improved retention and graduation rates.

SCWI Pilot B – **STEPS to College** will assist secondary school students' entry into college through the offering of dual credit courses in a supportive/coaching environment.

SCWI Pilot B – The **School-to-College Transition Program** is a joint partnership that provides students enrolled in alternative programs with opportunities to progress through college pathways that best suit their interests and modes of learning while receiving individual support and encouragement in a post-secondary setting.

A Budget for all three SCWI Categories is included at the conclusion of this proposal.

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CATEGORY 1 - REGIONAL PLANNING TEAM

Overview

Connecting GTA Teachers is a SCWI Regional Planning Team which brings together six colleges and eight district school boards in the Greater Toronto Area (GTA). According to Ministry statistics (2002), the area covered includes 252 high schools; 16,200 high school teachers; and 269,700 high school students.

Partners

- Centennial College
- George Brown College
- Georgian College
- Humber Institute of Technology and Advanced Learning-Lead Partner
- Seneca College
- Sheridan Institute of Technology and Advanced Learning.
- Dufferin-Peel Catholic District School Board
- Peel District School Board
- Halton Catholic District School Board
- Halton District School Board
- Toronto Catholic District School Board
- Toronto District School Board
- York Catholic District School Board
- York Region District School Board
- The Learning Partnership *

* We are currently in the process of formalizing membership of The Learning Partnership on the Regional Planning Team.

Membership

- One or two representatives from each college and each district school board form the core of the Planning Team. Contact information is appended to this document.
- Employer / business / industry / education representatives are brought in as appropriate to assist and advise on specific *Connecting GTA Teachers'* projects and initiatives.

Goals

Building upon the successes of the past and focusing on the priorities of the SCWI, the goals of *Connecting GTA Teachers* are to:

- Build and sustain on-going relationships between colleges and high schools.
- Keep all students engaged in learning to age 18 or graduation and beyond.
- Support clearer pathways to college programs for all high school students, including "at-risk" and "early-leavers."
- Align curriculum between high schools and colleges
- Increase the awareness of college opportunities among teachers, parents, administrators and students, starting as early as grade 7.
- Increase the knowledge and understanding of college faculty regarding the high school program.

Priorities

- Curriculum alignment and clearer student pathways.
- Enhanced teacher preparation and professional development.
- Promotion and marketing of college programs.

Responsibilities of the Regional Planning Team

- Consult with senior staff members (at the President, Director, Vice President, Dean, Superintendent level) or their designate from each of the colleges and district school boards.
- Set priorities, outline expected outcomes, plan the overall direction, and evaluate the success of Major Projects, Regional Forums and local projects.
- Ensure that employer / business / industry / education representatives are brought in as appropriate to assist and advise on specific *Connecting GTA Teachers'* initiatives.
- Consult with each member district school board and college and with other stakeholders as appropriate to determine needs.
- Review other SCWI projects and consider their local implementation as part of *Connecting GTA Teachers'* initiatives.
- Oversee, support and monitor the implementation of Major Projects, Regional Forums and local projects.
- Plan and implement communications strategies regarding *Connecting GTA Teachers'* projects and initiatives, to share the results of our work with other SCWI planning teams as well as to promote the message of School / College / Work in general.
- Plan and monitor the *Connecting GTA Teachers'* budget.
- Contract coordinators/facilitators for specific projects and/or overall project needs.

Responsibilities of Team Members

- Attend and actively participate in meetings.
- Serve as the key communications link regarding *Connecting GTA Teachers* and SCWI work within the participating district school board or college.
- Consult the appropriate staff within their school board or college regarding *Connecting GTA Teachers* and SCWI work.
- Support and participate in *Connecting GTA Teachers'* projects and initiatives.

Continuing Current Activities

During Phase 9, *Connecting GTA Teachers* proposes to continue the following current successful activities:

- Regular Meetings
- Coordinator for *Connecting GTA Teachers*
- Database
- 'Electronic' Registration Process
- Website for *Connecting GTA Teachers*
- Marketing and promotion – Information Brochure/Folder

Regular Meetings

In order to continue to build a shared vision and mutual understanding among the members of the Regional Planning Team, meetings will continue to be held on a regular basis. In Phase 9

a more flexible meeting schedule plus the ability to participate by teleconference will make it easier for some members to attend.

The agenda for each meeting will address the planning, monitoring and implementing of *Connecting GTA Teachers'* projects and initiatives, and will include discussion forums on relevant topics.

Coordinator for *Connecting GTA Teachers*

The duties of the Coordinator for *Connecting GTA Teachers* will continue to include, but not be limited to, the following:

- Reporting to and assisting the lead Manager for *Connecting GTA Teachers*
- On-going planning, development, implementation, and reporting
- On-going coordination and communication
- Recording detailed Meeting/Discussion Notes
- Managing Regional Forums
- Maintaining and enhancing database (see below)
- Maintaining and enhancing website (see below)

Meetings with Other Regional Planning Teams

During Phase 9, the Manager and/or Coordinator for *Connecting GTA Teachers* will participate in a minimum of three meetings with their counterparts from across the province. Of particular interest to *Connecting GTA Teachers* are the *PASS Pathways* Project (Eastern Region) and the *Widening Horizons* Pre-Service Teacher Training Project (Confederation, Lakehead, Thunder Bay).

Database

During Phase 8, *Connecting GTA Teachers* designed and developed an *Access* Database. This database, which includes people's photographs, could be replicated and utilized by other interested SCWI Regional Planning Teams. The *CGTAT* database now contains contact information for over 400 people. In Phase 9, *Connecting GTA Teachers* proposes to:

- Continue adding records.
- Continue enhancing the database design.
- Pilot the database with another interested Regional Planning Team.

'Electronic' Registration Process

In Phase 8, as an extension to its database, *Connecting GTA Teachers* has designed and developed an 'electronic' process for registering people for workshops, regional forums, etc. Applicants simply submit a completed form via email, and then just the data is extracted. Name tags can be printed and contact details entered into the database without any re-keying being necessary; thereby reducing labour costs significantly.

The registration system uses software that is already available on most desktop computers. The system was piloted successfully at *Connecting GTA Teachers'* most recent regional forum. In Phase 9, *Connecting GTA Teachers* proposes to:

- Continue using this system to register applicants to workshops and forums.
- Pilot this system with another interested Regional Planning Team.

Website for *Connecting GTA Teachers*

In Phase 8, in an effort to keep its members and others informed, and to expedite collaboration on documents/presentations, *Connecting GTA Teachers* designed, developed and implemented its own website, located at <http://cgtat.org>. The website is designed to be easily transferable (from one webmaster to another), expandable, accessible, and manageable. It is also designed to be friendly and attractive. In Phase 9, *Connecting GTA Teachers* proposes to:

- Continue enhancing and maintaining the website.
- Invite SCWI to provide a link on the "Go-to-College" website.
- Pilot this site with another interested Regional Planning Team.

Proposed New CGTAT Initiative

For Phase 9, *Connecting GTA Teachers* proposes the following new initiative:

Follow-up to Communications Skills Forums

In Phase 8, *Connecting GTA Teachers* conducted two regional forums on *Communications Skills*. Each forum registered over 200 participants, and judging from their evaluation/feedback, both forums were successful in achieving their main objective which was to increase the awareness of high school teachers and college faculty of each other's curriculum/teaching environment.

In addition to many commonalities, many issues and concerns were also brought forward. During Phase 9, *Connecting GTA Teachers* proposes to explore ways to continue the momentum generated by these forums and build upon their successes. We will explore methods and models for putting small **Action Groups** together that can take steps to implement some of the suggestions and recommendations that came out of the *Communications Skills* Regional Forums.

REVISED PROJECTED BUDGET

**SCWI Category 1
Connecting GTA Teachers
Regional Planning Team**

<u>PROPOSAL REQUEST</u>	\$ 60,000	
Revenue for Regional Forums	\$ 30,000	
Total Revenue:		\$ 90,000
<u>EXPENDITURES</u>		
Overall Lead <i>CGTAT</i> Management	\$ 16,000	
Overall <i>CGTAT</i> Coordinator	\$ 37,500	
Overall <i>CGTAT</i> Support	\$ 8,000	
Forums varying in size and scope	\$ 5,500	
Meetings with other Regional Teams	\$ 2,000	
Subcommittees / Action Groups	\$ 2,000	
Marketing and Promotion	\$ 8,000	
Photocopying, printing	\$ 3,500	
Contingency Fund to support local initiatives	\$ 4,000	
Follow-up to Regional Forums on Communications Skills	\$ 3,500	
Total Expenditures:		\$ 90,000

CATEGORY 2 – REGIONAL FORUMS

Building upon the successes of the past and focusing on the priorities of the SCWI, *Connecting GTA Teachers* will continue to offer regional forums that foster understanding and connections across the two educational sectors.

Themes for Forums

All forums will include the following themes:

- Exploration of ideas, issues, successful initiatives, and exemplary programs to enhance the success of all students;
- Examination of ways to address issues and to avoid pitfalls;
- Development of awareness of college pathways for future success;
- Examination of current research and data germane to the topic of the forums, such as job market trends and opportunities, profiles of successful college students in the programs under discussion, graduate employment statistics, etc.;
- Sharing of resources;
- Establishment of Action Groups to carry out follow-up and next steps;
- Keeping of detailed records for distribution to members, guests, and others.

Forum Participants

The following are potential participants in the forums:

- School board teachers, counsellors, administrators, staff and representatives of School / Parent Councils.
- College faculty, administrators and staff.
- Business and industry representatives (e.g. from college program advisory committees).
- Student participants, where appropriate.
- A representative from any college or school board who may be interested in attending and/or replicating the forum. Such people would be provided with the resources developed and the organizational details of the forum.
- *Note:* The number of participants that the forums will be able to accommodate will be determined by the funding available for regional forums.

Suggested Topics

Topics to be explored by the Regional Planning Team in 2005-2006 include, but are not limited to, the following:

- Technology
- Replication of Portfolio Assessment Forum
- Career Awareness for Parents, Teachers, Students and Administrators
- Essential Skills in College and Industry
- Ways to Engage More Students by Expanding Current Offerings
- Student Financial Planning: Ways to Go to College
- Articulation Agreements (current)
- Follow-up on the two Communications Skills Forums held in Phase 8
- Eastern Region's Pass-Pathways Project (possible replication in GTA)
- Supports at College Level for Students with Special Needs (including ESL), etc.

Outcomes and Benefits to Students

Expected outcomes and benefits of the regional forums:

- Student success in making the transition from secondary school to college is enhanced by making educators better informed about each others systems.
- Secondary school teachers have greater understanding of the college experience, college programs, entry requirements, career opportunities, etc.
- College faculty and staff have greater understanding of secondary school curriculum and practices such as assessment and evaluation policies and practices.
- Educators from both systems have opportunities for networking and continued relationship-building between both groups.

CATEGORY 3 – MAJOR PROJECTS

SCWI PILOT A — COLLEGE MATHEMATICS PROJECT (CMP)

SCWI PILOT B — STEPS TO COLLEGE

SCWI PILOT B — SCHOOL-TO-COLLEGE TRANSITION PROGRAMS

MAJOR PROJECT

SCWI PILOT A: COLLEGE MATHEMATICS PROJECT

An Application for Funding
From the School/College/Work Initiative
Phase 9

Submitted by
Laurel Schollen, Dean
Faculty of Applied Sciences and Engineering Technology
Seneca College

Summary

Title / Name of Project	College Mathematics Project – CMP Pilot B	
Lead College / Board	Seneca College	
List of Colleges and School Boards	Sheridan, George Brown, Georgian, St. Clair and Fanshawe.	
Main Contact Person	First Name	Laurel
	Last Name	Schollen
	Title, Position, Role	Dean, Project Coordinator
	Department (or School)	Faculty of Applied Science and Engineering Technology
	School Board or College	Seneca College
	Email Address	Laurel.schollen@senecac.on.ca
	Phone	416-491-5050
	Extension	2430 or 3775
	Qualification (brief)	HOT lead on SQC Mathematics Review, Project Lead for College Math Project, Pilot Project A
Brief Introduction / Overview of Project	<p>The CMP project involves an investigation into the sources of student failure or success in technology mathematics courses at participating Colleges of Applied Arts and Technology. The aim is to identify contributing factors, especially those under the control of either the high school or college systems by analyzing a database containing students' mathematics results, both past and present, along with other relevant factors. The analysis of the data will serve as a springboard to engage college and school board administrators and faculty in dialogue and development of strategies to ensure a seamless transition from secondary school to first year college mathematics. Areas of focus would be on curriculum alignment, teaching techniques and assessment.</p>	
Problem(s) to be addressed	<p>Alignment of mathematics curriculum between secondary school and college mathematics (technology), student success at college, student retention, student advisement.</p>	

Project Title

College Mathematics Project (CMP) – CMP Pilot B

Project Category

This proposal is requesting funding under SCWI Major Project Category A(1).

Regional Planning Team Support

The College Mathematics Project – Pilot B has the support of the *Connecting GTA Teachers* Regional Planning Team.

External Review

The College Mathematics Project – Pilot B, will meet accountability requirements as determined through the External Review process.

Project Goals

The project outlined here involves an investigation into the sources of student failure or success in technology mathematics courses at participating Colleges of Applied Arts and Technology. The aim is to identify contributing factors, especially those under the control of either the high school or college systems by analyzing a database containing students' mathematics results, both past and present, along with other relevant factors. The analysis of the data will serve as a springboard to engage college and school board administrators and faculty in dialogue and development of strategies to ensure a seamless transition from secondary school to first year college mathematics. Areas of focus will be on curriculum alignment, teaching techniques and assessment.

The next stage of the project would be implementation on system wide basis.

Background

Success rates in first year college technology mathematics courses are often unacceptably low. These low success rates are usually mirrored in other subjects in which mathematics is important and students who are unsuccessful in such key courses are usually unable to complete their chosen program, resulting in an unacceptably high “drop out” rate. In addition, colleges must spend significant amounts on remedial courses aimed at retaining such students.

Little is presently known about the causes of success and failure in College mathematics in Ontario. There are no formal linkages between the Ministry of Education and MTCU to investigate such matters and no professional forums where mathematics issues such as these are examined systematically. The database of first semester student experience and results, a key outcome of the College Mathematics Project, will enable college and secondary school administrators and faculty to discuss factors leading to student success or failure from a factual and statistically-relevant perspective, rather than an anecdotal one.

This lack of ‘hard’ information became evident during the SQC review of the secondary mathematics curriculum when the colleges were asked to provide feedback on the new mathematics curriculum. The lack of information regarding student enrolments in the

various secondary mathematics courses, student success rates in those subjects and information regarding student performance in first year math at the college level on a large scale resulted in a qualitative rather than quantitative approach to a complex task. Each college has a wealth of information regarding their students. This information, once pooled becomes a significant resource for educators wishing to improve retention and graduation rates.

We have demonstrated our commitment to the goals of the CMP by carrying out the initial phase of the project, Pilot Project A, in which a database of about 700 first semester students enrolled in the Faculty of Applied Science and Engineering Technology in fall 2003 at Seneca College was compiled and initial research questions developed and tested. We are now at a point where we can scale up the project to include more colleges.

CMP Pilot B will involve six colleges (to be confirmed) and a number of school boards. Other colleges conducting research in this area have also been invited and will be consulted. The project will provide the framework for the next stage in the project: full implementation on a province-wide basis. It will be at this final stage that CMP will have the greatest impact in identifying contributing factors and engaging secondary school and college educators and government in discussions to identify strategies to implement a seamless experience for students from secondary school to college. These discussions will lead to curriculum alignment, sharing of best practices and teaching resources to enrich each students' experience in mathematics.

The York/Seneca Institute for Mathematics, Science and Technology Education (YSIMSTE) has a mandate to seek ways to improve mathematics, science and technology in elementary, secondary and postsecondary schools. It is appropriate, therefore, that the College Mathematics Project be based at YSIMSTE. Also, although the project will be led by Seneca and the participating colleges and boards, it is important to acknowledge the importance of leveraging York's relationship with the Ministry of Education, provincial school boards as well as its expertise in mathematics education to further the project.

Broader Significance of the College Mathematics Project

While the CMP is significant in its own right in that increasing student success in postsecondary technology programs is obviously worthwhile, both for the students themselves and for Ontario economy generally, the project has broader significance at this particular time also.

The Ontario Ministry of Education is currently leading an important series of initiatives designed to address "Students at Risk" in both elementary and secondary schools and reports have been published with such titles as "Building Pathways to Success" for students in Grades 7-12. In these initiatives the main criterion for "success" is achieving Ontario Secondary School graduation and, for the Ministry of Education, whose mandate extends only to elementary and secondary schools, this appears reasonable.

On February 7, 2005, the Hon. Bob Rae, Advisor to the Premier and Minister of Training, Colleges and Universities, released his Postsecondary Review report, *Ontario: A Leader in Learning*. Mr. Rae had been charged "to review the design and funding of higher education in Ontario and to help the government develop strategies for higher educational

achievement”¹. Among the five “key themes” in the report are three that bear directly on the project outlined here:

Accessibility

Students who fail or drop out of first year essentially lose access to their desired career goals. Rae therefore asks “How can we increase participation and success in higher education?” and states “We need a much greater sense of continuous learning in educational policy. Changes in high school curricula have a strong impact on access to college and university.” Once fully implemented on a system basis, the CMP will provide a way for educators to share information, align curriculum, teaching and assessment practices and measure the effect of curricular changes.

Quality

Ensuring the success of students who enrol in College programs is an important element in overall program quality. Understanding how to do this is an essential first step and developing this understanding is the main goal of CMP.

Accountability

To know if the system is delivering the results we want or to know if we are improving our success over time requires that we have clear systems in place for measurement. The CMP offers a prototype of such a measurement system and will be of interest to the proposed Council of Higher Education

Excellent and important though the initiatives of both Ontario Ministries are, they both share the same fundamental and critical flaw. They maintain without question the jurisdictional “silos” within which the respective projects are defined. For the Ministry of Education, a student is not “at risk” if he or she successfully graduates from High School, even if they encounter subsequent failure in College. MTCU and the Rae Review, meanwhile, appear to be seeking the keys to accessibility, quality and accountability exclusively within the postsecondary system itself.

By contrast, the CMP is based on the assumption that the problems and challenges of the postsecondary system are inextricably bound up with the problems and challenges of the secondary system and vice versa. Consequently, we should examine the secondary/postsecondary interface to redefine both “success” and “at risk” for the secondary school system and also “accessibility, quality and accountability” for the postsecondary system. We recognise that jurisdictional barriers can often lead to misunderstanding and misplaced attributions of responsibility. However, we believe that the unique positioning of YSIMSTE at the interface between postsecondary and secondary systems can enable us to make a significant contribution both to students and to the Province.

¹ “Higher Expectations for Higher Education,” Postsecondary Review Discussion Paper, p. 5 (emphasis added).

Project Outcomes

Outcome 1 – To establish a database to include all incoming students in College² Technology programs in each year of the project, together with the following information for each student³:

- Age
- Gender
- Mature Student status
- Number of years since high school
- Names of high schools and school boards (where number of years since high school < 3)
- High school mathematics course selections with final marks in each course
- Other postsecondary education and (if so) mathematics courses/marks
- College program enrolled in
- College placement test results (Mathematics and English)
- College mathematics courses taken with final marks
- Mathematics-related courses⁴ taken with final marks
- Other information gathered in the OCAS application or through individual College admissions process (for example, background questions)

Outcome 2 – To conduct a statistical investigation into patterns and factors related to success and failure in College mathematics courses.

Outcome 3 – To engage college faculty and administrators and school board and school teachers and administrators in dialogue over the factors associated with success and failure and over appropriate steps to improve the situation. A detailed **Communication Plan**, to promote the project and to lay the groundwork for the discussion phase, is presented later in this CMP proposal.

Project Development and Implementation Plan

Project Lead

Seneca College, in conjunction with the York/Seneca Institute for Mathematics, Science and Technology Education

Project Staffing

Project staffing for phase B of the College Math Project will be as follows:

Project Coordinator	Laurel Schollen, Dean, Faculty of Applied Science and Engineering Technology, Seneca College, and YSIMSTE Co-Director
Associate Project Director	Graham Orpwood, Professor, Faculty of Education, York University, and YSIMSTE Co-Director

² “College” here refers to Seneca College of Applied Arts and Technology in the case of Pilot Project A and Seneca, George Brown, Georgian, St. Clair and St. Lawrence Colleges in the case of Pilot Project B.

³ Personal identification of all students will be removed to ensure personal privacy.

⁴ For each program one course will be selected as an “indicator” course

Associate Project Director	Margaret Sinclair, Professor, Faculty of Education, York University, and YSIMSTE Assistant Director
Other Research Staff	Trish Byers, Professor, Georgian College (PhD candidate, on sabbatical), Member of the Ontario College Mathematics Association. Tet Lopez, Research Assistant
Project Steering Committee	Bob Emptage, Dean, Engineering Technology, Georgian College Joy McKinnon, Dean, Faculty of Technology, George Brown College Mark Benoit, Chair, School of Business and Technology, St. Clair College Don Young, Dean, School of Computer and Engineering Technology, School of Skilled Trades, St. Lawrence College (tbc) OCME Representative – Trish Byers One rep from the Project Technical Committee Ministry of Education representative Ministry of Training, Colleges and Universities representative Representatives from each school board – Mathematics Department Heads
Project Technical Committee	Tet Lopez, Research Analyst, Strategic Planning, Seneca College Dan O’Sullivan, Manager, Enterprise Systems, Seneca College Hassan Assiri, Manager, Academic Computing Services, Seneca College Eileen Burns, Registrar, Seneca College Elaine Cunningham, Associate Registrar, Admissions, Seneca College Michael Cunningham, Systems Analyst, Enterprise Applications and Programming, Seneca College Registrar and/IT rep from each college

Project Plan

The development of an implementation plan for CMP has three distinct phases consisting of two pilots. The first phase, with one college, is presently nearing completion. The second phase will have six selected colleges participating. The last phase will be full implementation on a system-wide basis.

Timeline

Time Line	Activity
October 2004 – January 2005	CMP Pilot A planning
January – June 2005	CMP Pilot A, database development and analysis of data
June – September 2005	CMP Pilot B, planning phase
September – December 2005	CMP Pilot B, data extraction

December 2005 – April 2006	CMP Pilot B, data manipulation and analysis
May – June 2006	Presentation of findings, meeting of advisory board, regional forum with college math and secondary school math teachers and Ministries
September 2006 –	Full-scale database program and research phase-all colleges

CMP Pilot A

The CMP Pilot A began in October 2004 and is presently nearing completion.

It was determined that a limited qualitative analysis of the records of students in selected programs at one College, in this case, Seneca, would enable a review of the data required for the full CMP and some of the problems likely to be encountered in analysis.

Data was extracted from the Seneca College student database for approximately 700, semester-one students enrolled in Fall 2003 and Winter 2004 in the following two- and three-year programs:

- Electronics and Computer Engineering Technology.
- Biological Sciences and Applied Chemistry.

Outcomes of CMP Pilot A:

- Recommended revisions to the range of data fields to be extracted.
- Identification of key research questions.
- Specifications of the required database architecture and plans for its construction.
- Estimates of the resource requirements for a program to cover:
 - Participating Seneca College mathematics-related programs (Pilot A scope).
 - Participating College technology programs (Pilot B scope).
 - All mathematics-related programs, all Colleges, province-wide.
- Estimates of GTA and province-wide college interest in CMP.

Initial Findings of CMP Pilot A:

- Pass rates in first year college technology mathematics courses for schools under study.
- Determination of “terminal” high school mathematics course and grades.
- Correlation of high school Math grade with first year college mathematics grades for “old” and “new” grade 12 and OAC mathematics courses.
- Validation of the college indicator subject.
- Correlation of the college indicator subject with terminal high school math grade.
- Comparison of English placement test results with college mathematics grade and with high school math grade.
- Comparison of selected background data questions with college mathematics grade.

CMP Pilot B

It is anticipated that this pilot project will begin in June 2005 and will be completed in April 2006. At this time we are seeking SCWI funding for this phase of the project.

CMP Pilot B will apply what was learned from Pilot A and scale up the project to include five colleges: Seneca, Sheridan, George Brown, Georgian, St. Clair and Fanshawe.

Data will be extracted from the participating colleges' student database as follows. First semester students enrolled in Fall 2003, Winter 2004, Fall 2004 and Winter 2005 in the following technology programs:⁵

Architectural Technology	Energy Systems Engineering Technician & Technologist
Architectural Technician	Environmental Technician
Biotechnology Technologist	Environmental Technology
Building Renovation Technician	Fire Protection Engineering Technician
Building Restoration Technician	Fire Protection Engineering Technology
Building Systems Engineering Technician	Heating, Refrigeration and Air-Conditioning Technician
Building Systems Engineering Technology	Injection Mould Processing Techniques
Cabinet making	Integrated Technology Curriculum
Carpenter	Instrumentation Engineering Technologist and Technician
Chemical Engineering Technology	Manufacturing Engineering Technology
Chemical Laboratory Technician	Marine Engineering Technology
Chemical Laboratory Technology	Marine Technology
Civil Engineering Technician	Mechanical Engineering Technician
Civil Engineering Technology	Mechanical Techniques
Computer Engineering Technician	Mechanical Engineering Technology
Computer Engineering Technology	Mechanical Technician
Computer Programmer Analyst	Mechanical Technician - Co-op Diploma Apprenticeship
Computer Programmer	Medical Laboratory Science
Computer Systems Technician	Microelectronics Manufacturing Techniques
Computer Systems Technology	Motive Power Technician - Co-op Diploma Apprenticeship
Computer Networking & Technical Support	Motive Power Technician
Construction Engineering Technology	Plastics Engineering Technology
Construction Engineering Technician	Power Engineering Technology
Electrical Engineering	
Electro-Mechanical Engineering Technician	
Electronics Engineering Technician	
Electronics Engineering Technology	

⁵ This list of programs is to be confirmed by the participating colleges.

Projected Outcomes of CMP Pilot B:

- Confirmation of key research questions.
- Identification of challenges around extraction and analysis on a multi-institution basis.
- Estimates of the resource requirements for a program to cover all mathematics-related programs at all Colleges, province-wide.
- Estimates of province-wide college interest in CMP.
- Correlation of high school mathematics experience with success in first year technology mathematics.
- Correlation of high school mathematics experience with success in first year college indicator subject.
- Pass rates in each first year college mathematics.
- Correlation of English placement test scores with first year college mathematics score and with terminal high school mathematics score.
- Correlation of background data questions and success in math.
- Examination on the efficacy of individual college math placement test tools as predictors for success (correlation with high school grade and college grade). This examination could lead to colleges moving toward a “system” tool for mathematics for technology.
- Raising of awareness and garner support for implementation on a province-wide basis.
- Recommendations regarding the format for developing math exemplars.

Communication Plan

The project team will ensure an effective communication plan is in place to inform school boards, schools, and colleges of the project, its progress and will provide opportunities for the project team and advisory committee to present results to secondary school and college mathematics and technology faculty. This is essential if we are to move to a system wide study in the future.

To date, discussions and presentations on CMP have been made as follows:

February 2004	Discussion about the concept and need for information to support SQC Math review feedback from the Colleges at the CAAT Heads of Technology (HOT) plenary meeting; Mike McClements, Associate Vice President, Conestoga College presents information regarding math achievement at high school, placement test results and fate in first year college mathematics for technology programs.
May 2004	HOT meet with SQC Math review team at the AGM; concept is discussed, interest is shown by the Ministry and HOT is supportive.
November 2004	Briefing on CMP to the CCVPA executive.
February 2005	Progress report presented at the plenary meeting of the CAAT Heads of Technology (HOT) and at the Field’s Institute.
May 2005	Progress report presented at the OAME Nexus conference and to CAAT HOT at the Annual General Meeting.
June 2005	Presentation to Seneca College’s Deans, Chairs and Directors team.

June 2005-June 2006

The following communication plan will ensure that CMP Pilot B has an extensive “reach” and that SCWI receives recognition for funding of the project.

Publications/Reports/Websites

SCWI – Bimonthly progress reports will be provided to SCWI.

YSIMSTE News – The official newsletter of the York/Seneca Institute for Mathematics, Science and Technology Education, is published three times each year and has a large distribution. Recipients include elementary and secondary school teachers, college and university faculty, and government and industry partners. Commencing fall 2005, project updates will be published in each issue. In addition, reference to the project will be made on the YSIMSTE website, www.ysimste.ca

College Quarterly – “An academic journal devoted to the improvement of college education, CQ is a resource for teaching and learning and provides an opportunity for research publication, information about developments of significance to college educators, and commentary on policy issues of concern to the educational community and its attentive publics.”⁶

The CMP team will submit one article for publication in the College Quarterly.

College Mathematics Project Website – A website outlining the project goals, resources and key contacts will be launched by December 2005.

Conferences and Symposia:

STAO 2006 – We will also present the concept of the study at the Science Teachers’ Association of Ontario annual conference to be held in Toronto in November 2006. The call for presentations takes place in the winter preceding the conference.

CAAT Heads of Technology – A project report will be provided at the fall and winter plenary and at the May AGM of the provincial Heads of Technology group.

CAAT CCVPA – The concept for this project was presented to the Coordinating Committee of the Vice Presidents Academic group in fall 2004. A project report will be provided to this group through the HOT Exec Committee.

ACCATO 2006 – We will submit a proposal to present a session at the annual ACAATO conference in February 2006.

⁶ “The College Quarterly: A Journal of Research and Discussion for College Educators Across Canada”, website www.senecac.on.ca/quarterly/index.html

SCWI Forum – We view the forum as an integral aspect to the project as it provides the vehicle for secondary and college teachers to discuss the results of the research and begin to explore strategies to address student success issues: identifying the right type of student for college technology programs, comparing teaching methodologies, assessment techniques, etc.

“Lunch and Learns” – We will provide “lunch and learn” sessions for college and secondary school teachers and department heads on a local basis to raise awareness of the project as it is implemented. The feedback obtained through the lunch and learn sessions will be used to shape the regional forum to be held in May-June 2006.

Press Release – Descriptor of the College Mathematics Project

The College Mathematics Project (CMP) undertakes an investigation into the sources of student failure or success in technology mathematics courses at five Ontario Colleges of Applied Arts and Technology. The research will identify contributing factors by analyzing a database containing students’ mathematics results, both past and present, along with other relevant factors. The analysis of the data will serve as a springboard to engage college and school board administrators and faculty in dialogue and development of strategies to ensure a seamless transition from secondary school to first year college mathematics. Areas of focus would be on curriculum alignment, teaching techniques and assessment.

**PROJECTED BUDGET
COLLEGE MATHEMATICS PROJECT**

<u>PROPOSAL REQUEST</u>		\$ 90,500
<u>EXPENDITURES</u>		
Data extraction @\$5000.00 - each college	\$ 25,000	
Data filtering and cleaning – lead college	\$ 5,000	
Statistical analysis (portion of analyst)	\$ 15,000	
Research assistantship, college faculty	\$ 10,000	
Project Coordinator	\$ 5,000	
Implementation of Project Communication Plan, exclusive of Forum	\$ 10,000	
Travel	\$ 5,000	
Project Report	\$ 3,000	
Steering Committee	\$ 5,000	
Forum	\$ 7,500	
Total Expenditures		\$ 90,500

MAJOR PROJECT

SCWI PILOT B: *STEPS TO COLLEGE*

An Application for Funding
From the School/College/Work Initiative
Phase 9

Submitted by
Parkdale Collegiate Institute,
Toronto District School Board
and
Seneca College

Partners

The lead partners for this project are Parkdale Collegiate Institute (TDSB) and Seneca College.

Members of Steering Committee

The members of the Steering Committee are as follows:

From Parkdale Collegiate Institute:

Karen Falconer, Superintendent of Education
David Freedman, Principal
Irene Chewchuck, Vice Principal
Faz Khan, Curriculum Leader; Social Studies/Humanities
Kathi Silke, Curriculum Leader; Student Services

From Seneca:

Bernice Blackman, V.P., Student Success & Enrolment Services
Carol Henry, Associate Director Student Services
Kevin Pitts, Faculty, e-learning, Faculty of Technology
Mary Trant, Faculty, General Education, Faculty of Business

Project Coordinators:

From Parkdale: Faz Khan, Teacher
From Seneca: Mary Trant, Faculty

Description / Press Release

STEPS to College, a joint partnership project between Parkdale Collegiate Institute and Seneca College, has the goal of assisting secondary school students' entry into college through the offering of dual credit courses in a supportive/coaching environment; This partnership model has the capacity to be replicated by any college/high school partnership across Ontario. Students who participate and successfully complete the prescribed college and high school courses in this project will be eligible to receive a minimum of one first year college credit, as well as two OSSD credits. By developing this direct pathway to college for a broad range of students who are at high risk of not completing the OSSD requirements, or of not continuing on to post secondary education, it will be possible to have a positive impact on the TDSB's current leave rate of 8%, as well as encourage early leavers to come back to school, and to increase the number of TDSB students who pursue college-level post secondary education.

Detailed Description

- College professor will communicate with the secondary school (using broadband technology) and provide instruction in keeping with the college course requirements.
- Students would be able to travel to the college when and where practical training may be a requirement of the college course.
- On alternate days the TDSB teacher will teach the OSSD course that has Ministry of Education expectations that compliment the college course.
- A co-op component would ensure the students receive a practical, real world experience.

Priorities to be Addressed

- To develop a direct pathway to college for TDSB students who are most at risk of not completing OSSD requirements.
- To lower the TDSB's current leave rate of 8%.
- To encourage re-entry of early school leavers.
- To increase the number of TDSB students who pursue post-secondary education at the college level.

Projected Outcomes / Success Criteria

We are projecting the following outcomes:

- Increased credit accumulation by participants
- Increased pass rates of compulsory English credits by participants
- Significant drop in annual school leaver rate
- Increased attendance
- Increased student re-entry rates
- Increased graduation rates
- Increased rates of application and acceptance to college

All the above as compared to rates of Parkdale students not participating in the *STEPS* program.

Key Planning Steps

The college courses will be taught using a range of technology interfaces. The high school students will have the opportunity to interact directly with the college and the professor through participation in at least four classes at the college per semester. Broadband technology that utilizes text, voice and video conferencing will be used to link the high school classroom and the College, enabling all other components of the course to be taught via Broadband. Students will also have the ongoing opportunity throughout the semester to communicate with faculty via email.

College professors will communicate with the secondary school and provide instruction appropriate to the college course requirements. Students will also be traveling to the college when and where practical training is part of the requirements of the college course. The courses will run during the fall and winter semester to coincide as closely as possible with the high school calendar.

Faculty Involvement

On alternate days, the TDSB teacher will teach the OSSD course that has Ministry of Education expectations which compliment the college course. The TDSB teacher will also be responsible for providing literacy skill support and learning strategies for successful completion of the program and continued academic success at the post-secondary college level.

Project Sharing

Our plans for sharing this initiative with other schools and boards are as follows: The project coordinators will be presenting the project to the family of schools to which

Parkdale C.I. belongs within the TDSB, as well as to the greater TDSB at an upcoming Principal's Meeting. We also hope to share our ideas and gather support for the delivery of similar projects from other school boards across Ontario. Likewise, Seneca will be presenting the project at the annual SCWI conference, in hopes of informing and attracting other colleges in the province.

Parkdale C.I. and Seneca College will jointly take on the task of increasing awareness of this project to the general public and our immediate communities. This effort will be facilitated through information sessions, media attention and various public relations efforts. We feel it is essential to inform parents and students of the many and varied options available for post secondary education in the college environment.

A template will be completed on operational procedures and outcomes.

Accountability

The staff of Parkdale Collegiate Institute and Seneca College are dedicated to the success of this project. Our intention is to remain focused on our stated outcomes and expectations, which are simply to keep students in school longer and to offer them more post secondary educational options, thereby increasing student's aspirations to go to college and their ultimate access to and success at college. This model focuses on providing the necessary encouragement and support of students, to achieve these goals.

Parkdale and Seneca will be compiling detailed records of student participation in this project. These records will include attendance figures, performance rates, graduation rates and re-entry rates of participating students. The records and data will be analyzed and compared to non-STEP participants and then used to evaluate the impact of this type of intervention on the stated goals and objectives.

Measuring Results

Indicator	Expected Results	Tracking Period
Credit Accumulation	There will be increased credit accumulation by students involved in the program. compared to students' previous credit accumulation	Tracked from 2005-06 to 2006-07 and compared to 2004-05
Pass rates of Compulsory English Credits	There will be increased pass rates of compulsory English credits by students in the program compared to students in the school who are taking the same courses not in the program.	Tracked from 2004-05 to 2006-07 compared to other students in the school taking same courses
Annual School Leaver Rate	The annual school leaver rate will drop significantly.	Tracked 2004-05 to 2006-07
Student Attendance	Student attendance will increase compared to that	Tracked 2004-05 to 2006-07

	of same students' attendance in previous years.	
Re-Entry	Student re-entry rates will increase compared with that of previous years without Steps to College Program.	Tracked from 2004-05 to 2006-07
Graduation and College Acceptance	Graduation rates and rates of application and acceptance to college will increase compared to previous years without Steps to College program.	Tracked from 2004-05 to 2006-07

Projected Budget

STEPS to College

PROPOSAL REQUEST

Other sources of revenue:

\$ 27,800

\$ 70,000

Total Revenue:

\$ 97,800

EXPENDITURES

Steering Committee: Travel & Meeting Expenses

\$ 1,000

Project Coordinator Release Time

\$ 3,000

Program Development: Supplies, Texts, other resources

\$ 3,000

Student Travel

\$ 3,200

Professional Development

\$ 1,000

Project Report / Assessment of Data

\$ 1,400

Promotional Materials

\$ 4,000

Replacement of College Faculty

\$ 8,000

Supply Teachers

\$ 3,200

Total Expenditures

\$ 27,800

MAJOR PROJECT

**SCWI PILOT B: SCHOOL-TO-COLLEGE TRANSITION
PROGRAMS**

An Application for Funding
From the School/College/Work Initiative
Phase 9

Submitted by

Dufferin-Peel Catholic District School Board
and
Sheridan College Institute of Technology and Advanced Learning

Summary

Students attending schools in Dufferin-Peel experience a range of life challenges. Some students are confronted by more of these circumstances than others, which may lead to disengagement, vulnerability and risk of school failure. Students enrolled in alternative programs are provided with an enhanced sense of belonging, engagement, and responsibility for learning, which assists them in reaching their full potential. The goals of these programs broadly concern:

- Helping students earn the credits needed to graduate from secondary school;
- Providing career development;
- Fostering psycho-social development; and
- Facilitating transition to post-secondary or the workplace.

The long-term vision for alternative education programs incorporates and outlines several key points, for serving the academic needs of these students, including:

- Provision of multiple pathways and entry points for learning;
- Reduction of drop-out rates and increased graduation rates stemming from greater opportunities for engagement, accomplishment and success;
- Celebration and promotion, by all school partners, of a diversity of successful pathways;
- Improvement of awareness and promotion of on-going access and admittance to program entry points that are based on student interest, strengths and capabilities.

A joint partnership between Dufferin-Peel Catholic DSB (Dufferin-Peel) and Sheridan College Institute of Technology and Advanced Learning (Sheridan) cultivates a classroom learning environment on a college campus. Students learn and progress through a college pathway that best suits their interests and mode of learning while receiving individual support and encouragement in a post-secondary setting.

The partnership provides a program of study that enables secondary school students to test the potential of success in a college environment while experiencing integration in selected general arts and science college courses. Transferable skills and credits are gained while building on secondary school experiences.

Introduction

Each of us has an instrument to bring to the vast orchestra of humanity, and each of us needs help to become all that we might be. — Jean Vanier

Background and Evidence-Based Information

The recent report on the double cohort in Ontario secondary schools (King, 2004) indicates that only 62% of students enrolled in Grade 9 in 1999-2000 graduated from secondary school in four years. Approximately 25% of students in this cohort have twenty or fewer credits and are unlikely to graduate. This group of students includes those who are “at risk”, as well as a smaller, hard-to-serve group of students who are disengaged, vulnerable and who cannot succeed in the highly formalized and regulated environment of traditional high schools. Alternative education programs are designed to

serve these students who are most at risk of school failure and premature departure from the school system. These programs provide students with greater opportunities for engagement, accomplishment and success, contributing to reduced drop-out rates, increased graduation rates and greater numbers of highly skilled and competent youth entering the workforce. The unemployment rate in 1998 for people age 15 – 29 without a high school diploma was 23 percent, compared to 5.2 per cent for those with graduate degrees, according to Statistics Canada.

The Region of Peel is comprised of the City of Mississauga, the City of Brampton, and the Town of Caledon and it is the second largest municipality in Ontario with a population of approximately 1,080,000. Peel's population has grown by 16% between 1996 and 2001 while Ontario's population has grown by 6.1% overall. By the year 2011, the Region of Peel's population is projected to be 1,217,000. Children under the age of 19 years are identified as 30% of Peel population. (2001 Census).

Project Goals

- To support at-risk students in making a successful transition from secondary school to an effective program of study at the college level
- To expose students to individual career development support and services so as to select appropriate programs geared towards personalized career aspirations
- To improve student achievement and provide informed college options through a joint school / college partnership
- To improve communication and encourage the re-entry of students back into an educational pathway
- To increase the number of secondary school graduates and ensure completion of college registration
- To improve the probability of post-secondary success through mentorship and connections to effective college supports based on individual needs

Proposal Overview

This proposal highlights joint alternative education opportunities between Dufferin-Peel and Sheridan and describes the unique philosophy, design and delivery of instruction in these programs. Accordingly, the report is organized into the following sections:

- Alternative Education Initiative – Sheridan – Davis Campus;
- Curriculum Alignment and Student Pathways – Sheridan – Skills Training Centre (STC);
- Budget- Summary of Expenditures.

Descriptions of Proposed Programs

PROGRAM 1: School-to-College Transition Program (STCTP)

**Davis Campus
7899 McLaughlin Road
Brampton**

STCTP Program 1 Overview

This partnership agreement between Sheridan and Dufferin-Peel Catholic DSB is a SCWI project that hosts a secondary school alternative classroom at a college campus. This joint venture enables senior secondary students to attend a full-time alternative program for the equivalent of three 110 hour credit courses delivered in a post-secondary setting with a secondary teacher to complete secondary school diploma requirements. Students are eligible to earn an additional college credit course per semester towards a college diploma with pre-qualification to college program entrance.

Course expectations for secondary school requirements are aligned with the General Arts and Science college courses offered. This mutually beneficial arrangement provides the school district with an off-site satellite alternative learning environment while enabling the College to receive better-prepared, post-secondary students for subsequent years of study. This project allows for the development of courses that will best serve the needs of the alternative education learner while meeting the requirements of *The Ontario Curriculum, Grades 9 to 12* (Ministry of Education, 1999–2000).

Admission Criteria

- Students who wish to learn in, or would benefit from, the learning environment of a college campus.
- Senior students with a minimum of 22 earned secondary school credits.
- Students who require upgrading in senior college English or Math courses.
- Senior students seeking re-entry to school or who are “at risk” of dropping out.
- Students who may wish to attend college in the future but who are uncertain of their skills to achieve success.
- Students who require additional support in the transition to a post-secondary college program.

Project Outcomes and Benefits to Students

- Students take one college course while completing secondary school courses in an alternative learning program located at a college campus.
- Students attend a college class and upon successful completion of a college credit may receive an advance standing or redeemable credit for college admission.
- Students are eligible to receive dual credit towards Ontario Secondary School Diploma and College Preparation. Dual program and PLAR Challenge process will enable students to challenge individual courses towards an Ontario Secondary School Diploma.

- Secondary students are partnered with Sheridan student mentors in order to sample college classes and to receive first hand accounts of college-life.
- Students may attain a high school diploma while exploring post-secondary possibilities and developing the knowledge and skills required for successful college program admission through access to college career resource centre and other college counselling resources.

Completed STCTP Pilot

From February to June 2005, a pilot of this proposed program ran at the Sheridan Davis Campus. The results of this pilot are highlighted in the following table.

Table A
STCTP Initial Pilot
February to June 2005
Sheridan /Davis Campus

Preliminary Student Enrolment Data

Student Enrolment	Feb – June 2005	Successful Secondary Credits	Attempted College Course	Potential OSS Graduates June 2005
Sheridan Pilot – Davis Campus	22	55	11	21

REVISED PROJECTED BUDGET—PROGRAM 1

School-to-College Transition Program

Davis Campus
For 25–30 students

PROPOSAL REQUEST \$ 77,500

EXPENDITURES

School Board Expenses

In-Kind Donation By Board:

2.0 Teacher Salaries/Benefits (\$ 150,922)

Operating Budget:

Learning material, resources. Educational training,
development/planning, travel and parking, student
agendas, office expenditures, field trips, promotional
materials, data collection \$ 7,000

\$ 6,000

Student Transportation

College Expenses

2580.00 per student x 25 \$ 64,500

Total Expenditures for Program 1 \$ 77,500

PROGRAM 2: Curriculum Alignment and Student Pathways Program

**Skills Training Centre
Trafalgar Campus
407 Iroquois Shore Road
Oakville L6H 1M3**

Program 2 Overview

This initiative will develop curriculum for the following project with the understanding that funding to actually pilot the project will be requested at a later Phase in the Project or provided by alternate sources.

This partnership agreement with Sheridan is a School-to-College initiative that hosts a secondary school alternative classroom at a college campus. This joint venture enables senior secondary students to participate in academic, experiential and secondary school credits taught by secondary teachers on a college campus. Students preview college technology programs and have access to college technology equipment while earning secondary technology credits. This mutually beneficial arrangement provides the school district with an off-site satellite alternative learning environment while enabling the College to receive better prepared post-secondary students for subsequent years of study. This project allows for the development of courses that will best serve the needs of the alternative education learner while meeting the requirements of *The Ontario Curriculum, Grades 9 to 12* (Ministry of Education, 1999-2000).

Admission Criteria

- Students who wish to learn in, or would benefit from, the learning environment of a college campus.
- Senior students with a minimum of 22 earned secondary school credits.
- Students who require upgrading in senior college English or Math courses.
- Senior students seeking re-entry to school or who are “at risk” of dropping out.
- Students who may wish to attend college in the future but who are uncertain of their skills to achieve success.
- Students who require additional support in the transition to a post-secondary college program.

Projected Outcomes and Benefits to Students

- Students participate in academic, experiential learning and technology secondary school credits taught by secondary school teachers on a college campus.
- Students are provided with a preview of college technology programs and access to college technology equipment while earning secondary school technology credits.
- Secondary students are partnered with Sheridan student mentors in order to sample college classes and to receive first hand accounts of college-life.
- Students may attain a high school diploma while exploring post-secondary possibilities and developing the knowledge and skills required for successful college program admission through access to college career resource centre and other college counselling resources.

Students participate in secondary school curriculum at the Sheridan campus on Tuesdays and Thursdays. On Mondays, Wednesdays and Fridays, students would participate in a college technology preparation program outlined as follows:

Term One: Precision Machining Trades

Interpreting Engineering Drawings – Precision Machining Trades (3 hrs per week, 3 x 1 hr)

In this course you will learn to read, interpret and sketch blue prints used in the precision machining trade sector.

Successful students will be able to:

1. Identify different formats used for engineering drawings.
2. Explain dimensional terminology and practices.
3. Interpret different types of engineering drawings.

Trade Theory - Precision Machining Trades (3 hrs per week, 3 x 1 hr)

In this course you will develop an understanding of safe machining set up and working procedures used in the precision machining and tooling trade sectors. You will learn to apply the process in order of operations needed to effectively produce accurately sized components.

Successful students will be able to:

1. Demonstrate safe working practices.
2. Demonstrate measuring techniques using direct, indirect, linear and angular equipment.
3. Identify and describe the metal removal procedures for basic tool room equipment such as mills, lathes and grinders.

Trade Practice - Precision Machining Trades (9 hrs per week, 3 x 3 hrs)

In this course you will learn to use a broad range of machine tools found in typical tool rooms, machine shops, and manufacturing environments. This course is taken in conjunction with Trade Theory and provides hands application.

Successful students will be able to:

1. Select the correct measuring equipment to suit a particular job.
2. Demonstrate measuring/checking/gauging techniques by using direct, indirect and angular measuring equipment.
3. Perform fitting techniques using appropriate hand/bench tools.
4. Safely set up and use pedestal grinders to sharpen drills.
5. Perform metal removal procedures for basic tool room equipment such as mills, lathes and grinders.

Term Two: Electrician, Construction and Maintenance Trade

Prints and Standards – Electrical (3 hrs. per week, 3 x 1 hr.)

In this course you will learn the basics used to read and interpret building blueprints and complete layout drawings of basic electrical systems and installations according to the Canadian Electrical Code.

Successful students will be able to:

1. Identify different views used in a typical set of building blueprints.
2. Interpret various symbols used in a typical set of building blueprints.
3. Scale and dimension components of a typical set of building blueprints.
4. Locate rules and regulations in the Canadian Electrical Code book.
5. Layout electrical devices and systems on a set of typical building blueprints while adhering to the Canadian Electrical Code.

Trades Installation Practices – Electrical (4 hrs. per week, 2 x 2 hrs.)

In this course you will learn to install various electrical systems and components while adhering to the Canadian Electrical code and safe working practices.

Successful students will be able to:

1. Demonstrate safe working practices when working with electricity, hand tools, and power tools.
2. Install non metallic sheathed cable and armoured cable and their associated fittings.
3. Bend and install various conduit systems and their associated fittings.
4. Install and connect electrical systems and devices.
5. Test electrical circuits and devices for proper operation.

Schematic Diagrams and Machine Wiring (4 hrs. per week, 2 x 2 hrs.)

In this course you will learn to draw and interpret electrical schematic diagrams used in basic signal circuits and machine wiring and apply this knowledge while connecting the above mentioned circuits.

Successful students will be able to:

1. Identify standard symbols used in schematic diagrams.
2. Determine the sequence of operations of basic electrical circuits using schematic diagrams.
3. Cross reference between schematic diagrams and wiring diagrams for various electrical installations.
4. Wire and test basic signal circuits and motor control circuits using schematic diagrams.
5. Use computer technology to draw, connect, and test basic electrical circuits.

REVISED PROJECTED BUDGET—PROGRAM 2

Curriculum Alignment and Student Pathways Program

***Skills Training Centre
Trafalgar Campus***

For 20 students

PROPOSAL REQUEST – DEVELOPMENT PHASE \$ 17,000

EXPENDITURES

College Costs

Curriculum Development costs \$17,000

Total Expenditures
For the Development Phase of Program 2 \$ 17,000

REVISED TOTAL PROJECTED BUDGET FOR ALL CATEGORIES

for
Connecting GTA Teachers
SCWI Project 9–2

All SCWI Categories
Phase 9

Category 1 - Regional Planning Team

Project Name: *Connecting GTA Teachers*

Project Number: 9–2

Details: Pages 4–13

PROPOSAL REQUEST

\$ 90,000

Category 2 - Regional Forums

Proposals for Regional Forums are pending appropriate planning.
Proposals will be submitted prior to the March 2006 deadline.

Category 3 - Major Projects

SCWI Pilot A

Project Name: *College Mathematics Project (CMP)*

Partners: Seneca College, Lead

Details: Page 12

PROPOSAL REQUEST

\$ 90,500

SCWI Pilot B

Project Name: *STEPS to College*

Partners: Parkdale C.I. and Seneca College

Details: Page 24

PROPOSAL REQUEST

\$ 27,800

SCWI Pilot B

Project Name: *School-to-College Transition Programs*

Partners: Dufferin-Peel Catholic DSB and Sheridan

Details: Page 29

PROPOSAL REQUEST

\$ 94,500

Revised Total Projected Budget for All Categories

\$ 302,800