

University of  
**Waterloo**



**LEARNING FROM EXPERIENCE:  
Enhancing  
Co-operative Education and Career Services  
at the University of Waterloo**

UW Review Committee for Co-operative Education and Career Services

31 August 2005





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5 September 2005

Dr. Amit Chakma, Vice President Academic and Provost  
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Dear Amit,

The UW Review Committee for Co-operative Education and Career Services is pleased to submit its report, **LEARNING FROM EXPERIENCE: Enhancing Co-operative Education and Career Services at the University of Waterloo.**

The Review Committee believes there are many strengths regarding co-operative education and career services at UW, but also that there are opportunities for significant improvement. Forty-eight recommendations are presented in this report. These will require decisions and action at the university level, within Faculties, and within CECS. We ask you to take a leadership role in ensuring that the community moves forward to enhance co-operative education and career services at UW.

The Review Committee received advice and assistance from many individuals. In particular, we would like to recognize the important contributions from Bruce Lumsden, Cathie Jenkins, Keith Kenning, Kerry Mahoney and Dave Thomas in CECS; Jim Downey, Pat Rowe and Gary Waller from the Waterloo Centre for the Advancement of Cooperative Education, and Bob Truman from Institutional Analysis and Planning. In addition, we recognize the excellent advice provided by the External Assessment Team, chaired by Nancy Johnston of Simon Fraser University. Frances Hannigan from the office of the Associate Provost, Academic and Student Affairs provided administrative support throughout the review process.

If you have any questions, we would be happy to discuss them with you.

A handwritten signature in black ink, appearing to read "Judi Carter".

Judi Carter, Executive Officer, Applied Health Sciences

A handwritten signature in black ink, appearing to read "Emanuel Carvalho".

Emanuel Carvalho, Associate Dean, Special Programs, Arts



Wayne Loucks, Associate Dean, Undergraduate Studies, Engineering



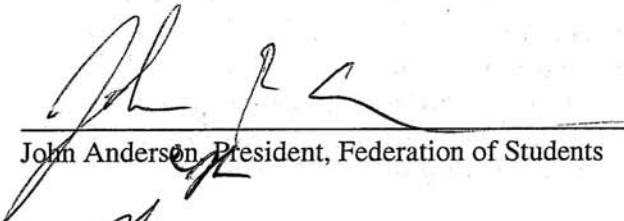
Greg Michalenko, Environment and Resource Studies, Environmental Studies



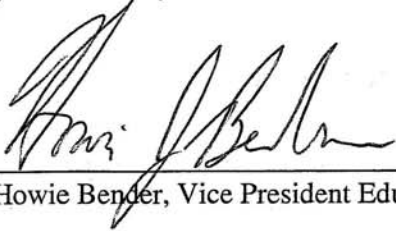
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# TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
<b>1. PURPOSE.....</b>	<b>1</b>
<b>2. CONTEXT.....</b>	<b>2</b>
2.1 Co-op at Waterloo.....	2
2.2 Career Services at Waterloo.....	4
2.3 Present Situation .....	5
2.3.1 Co-operative Education .....	6
2.3.2 Career Services .....	7
2.4 Looking to the Future .....	9
<b>3. SIGNIFICANCE OF CO-OPERATIVE EDUCATION FOR WATERLOO .....</b>	<b>10</b>
3.1 Coordination and Collaboration between CECS and Faculties .....	12
3.2 Co-operative Education Council.....	12
3.3 Mentoring New Faculty and Staff related to Co-operative Education and Career Services .....	13
3.4 UW 50 <sup>th</sup> Anniversary in 2007: Event to Celebrate Co-op .....	13
<b>4. ISSUES, CHALLENGES AND OPPORTUNITIES.....</b>	<b>15</b>
4.1 Overview regarding Work-Integrated or Experiential Learning: Co-op, Internships, Service Learning .....	15
4.2 Enhancement Features and Opportunities .....	17
4.2.1 Co-op, internships and service learning.....	17
4.2.2 Work-term placements: success in placements; number of work terms, when work terms begin in academic plans.....	17
4.2.3 Alternative experiential learning .....	21
4.2.4 Learning outcomes: academic credit for work placements.....	22
4.2.5 Evaluating learning during work terms.....	23
4.2.6 Enterprise Co-op.....	25
4.2.7 Internationalization of Co-op.....	26
4.2.8 Graduate Studies .....	27
4.2.9 Support from Housing regarding accommodation in other cities .....	28
4.2.10 Waterloo Center for the Advancement of Cooperative Education (WatCACE) .....	29
4.2.11 Waterloo Advisory Council (WAC).....	30
4.2.12 Career Services: alumni, staff.....	31
4.3 Management Issues.....	31
4.3.1 Co-op .....	31
4.3.1.1 JobMine: matching students to jobs .....	31
4.3.2 Career Services .....	32
4.3.2.1 Visibility and accessibility .....	32
4.3.2.2 Assistant Director's role.....	33
4.4 Administrative Issues.....	33
4.4.1 Co-op .....	33
4.4.1.1 Administrative organization.....	33
4.4.1.2 Coordinators.....	33
4.4.1.4 Marketing arrangements.....	34
4.4.1.5 Funding .....	35

4.4.1.5.1	BIUs not reflecting extra costs.....	35
4.4.1.5.2	Tax credits for employers .....	35
4.4.1.5.3	Student co-op fee .....	36
4.4.2	Career Services .....	39
4.4.2.1	Financial arrangements .....	39
4.5	Next Steps .....	40
4.6	Recommendations: Lead Responsibility, Resource Implications, and Timing .....	41
5.	APPENDICES .....	51
5.1	Review Team and Process .....	51
5.2	Presentations to the Committee .....	52
5.3	External Review Team Members.....	53
5.4	Government of Ontario, Regulation 330/97, amended as Regulation 268/00:.....	54
6.	REFERENCES .....	55



## EXECUTIVE SUMMARY

Many would argue that co-operative education defines UW, and is a major contributor to its reputation for being innovative and entrepreneurial, and creating leaders of tomorrow. Waterloo's goal should be to achieve and maintain widespread recognition as a global leader related to co-operative education, and be a model against which others measure themselves. Furthermore, career services should meet the needs of regular students and alumni, as well as reflect the significance of co-op education at UW. In brief, both co-operative education and career services should be excellent and world class.

Waterloo has much to be pleased with regarding the present situation. Many academic plans are acknowledged to be excellent and, because of their reputation, attract outstanding students. Students understand that a co-op experience enhances their academic learning, and usually leads to a premium salary after graduation. A wide and deep pool of students is attractive to employers, who expect that UW co-op students and graduates will make strong contributions. Many employers have been associated with Waterloo for decades, understand the basic principles of co-operative education, and continue to hire students even during downturns in business cycles. With its long experience with co-operative education, the concept of work-integrated education is well established and recognized at Waterloo, and is a part of the institutional culture. A large and committed academic support unit, and a dedicated building, provide professional support to employers, students and Faculties. The staff in CECS, and others at UW, also often play major leadership roles in national and international co-op organizations. And, Waterloo continues to innovate related to work-integrated learning, such as when enhancing work terms by including additional online class-based activity to give academic credit for work terms, and encouraging students to have non-traditional co-op work experience.

Career Services has an excellent reputation among students (co-op and regular) and alumni who use its services. And, while providing services to all students, it also plays a key role in supporting students in co-op plans. Furthermore, its *Career Manual* has been adopted by post secondary institutions, companies and other organizations because of its high quality.

Notwithstanding these positive features, however, co-op and career services each has *issues or challenges* that require attention.

For co-operative education,

*students* expect

- the number and quality of employment opportunities to be increased,
- Faculties' requirements regarding work-term reports to be explicit and clear,
- the job matching process to be effective and efficient, and
- the rationale for and cost of services provided by CECS to be transparent.

*employers* expect

- in addition to high-level disciplinary and/or professional skills, student employees to have excellent work-place skills,
- student employees to have a good appreciation of appropriate behaviour in the work place, and
- the job matching process to be user friendly.

*CECS staff expect*

- needs and priorities for students and academic plans to be clear regarding support required from CECS,
- timely opportunity to be provided to participate in determining admission targets when expanding existing plans or developing new plans,
- timely opportunity to be provided to participate in the assessment of work opportunities when existing plans are being expanded or new plans are being considered,
- sufficient funding to support expected services to be available, and
- there be commitment within the unit to review and modify existing CECS practices.

*Faculties expect*

- CECS services to be developed or modified through systematic consultation with Faculties, Departments, Schools or UW Colleges,
- the co-op employment system to provide quality jobs of sufficient quantity,
- the roles of the Coordinators in CECS to be reviewed, and
- Faculties and CECS attempt to reduce stress on co-op students during both academic and work terms.

the *University* expects

- the ideals of co-operative education to be foundations for co-op at UW,
- the co-op employment system to provide quality jobs of sufficient quantity,
- the partnership between CECS and the Faculties and UW Colleges to be strong and robust,
- marketing of co-op to be more integrated with other UW marketing activities,
- CECS to have a strategic plan as the basis to allocate its resources, and
- sufficient funding to be provided, while maintaining a competitive position in terms of costs to co-op students.

For career services,

*students* expect

- the relative roles and functions of Career Services and Counselling Services to be clear,
- the services for regular students to be more visible, and
- the rationale for the package of programs from Career Services to be transparent.

*Faculties*, especially those with a significant proportion of regular students, expect

- Career Services to provide the needed support to regular students as well as to meet the specific needs of co-op students, and
- Career Services to provide support to students seeking jobs at graduation.

*Career Services staff* expect

- the role of Career Services to be more visible across the campus with all stakeholders and especially with regular students.

the *University* expects

- the relationship between Career Services and Counselling Services to be clear, and
- the Career Services profile to be raised so students who could benefit from its services use them.

Against these issues, the Committee believes the *vision* for co-operative education at the University of Waterloo should include:

- academic plans of outstanding quality,
- co-operative education as fundamentally an educational experience,
- sufficient, high-quality work experiences for students,
- strong partnerships (*external*: University, employers; *internal*: Faculties, CECS, students), and,
- effective, efficient and transparent co-op services.

Career Services should be closely associated with Co-operative Education, because of the resulting synergy. Given that structural arrangement, Career Services should:

- provide all students (co-op and regular) with access to their services;
- offer services explicitly designed to meet the needs of co-op students, and
- offer services to alumni.

To claim an international leadership role, UW needs to take action on various fronts:

- (1) enhance the significance of co-operative education,
- (2) raise the profile of Career Services,
- (3) confirm co-operative education as primarily an educational experience, and as enhancing students' learning experience,
- (4) be more effective in providing jobs of sufficient quantity and quality for students during co-op work terms,
- (5) strengthen partnerships among Co-operative Education and Career Services, and the Faculties, employers and students, and
- (6) make the operations of the Department of Co-operative Education and Career Services effective, efficient and transparent.

Seventeen *key* recommendations relating to these priorities are provided below, with reference to the six major points identified immediately above. These six points are all viewed as important, and thus the Committee strongly believes that in the next year all of the 17 recommendations require action.

In Section 4.5, the Committee identifies what should be “next steps”, and highlights that action will need to be taken by all partners, ranging from CECS, Departments and Schools, Faculties and the University.

*All* 48 recommendations are provided in the full report. In Section 4.6, the recommendations are presented together, along with information about who should have responsibility for them and by when action should be taken.

## **(1) Significance of Co-operative Education**

**Recommendation 6:** *UW should continue to emphasize co-op education over other forms of experiential learning, and should commit to have co-operative education continue to distinguish as well as define UW.*

**Recommendation 2:** *Each Faculty identify a faculty or staff member who has lead responsibility for co-op education, and give that person a highly visible role and position. Where the work load will be significant because of a large number of students in co-op, this position should be at the level of Associate Dean. If appropriate, responsibility for co-operative education could be combined with other responsibilities.*

**Recommendation 3:** *A Co-operative Education Council be established, with membership from each of the Faculties, CECS, students (the latter to be determined by the FEDs President or Vice-President Education), and one non-UW co-op employer, and be accountable to the Associate Provost, Academic and Student Affairs.*

## **(2) Profile of Career Services**

**Recommendation 37:** *Career Services and Co-operative Education be kept together in one Department.*

**Recommendation 39:** *Career Services and Counselling Services develop a strategy to clarify their complementary roles, and, do that by not later than December 2005. Once that task is completed, the distinctive roles should be communicated to the Student Services Advisory Committee and to the Co-operative Education Council.*

## **(3) Co-operative Education as an Educational Experience**

**Recommendation 14:** *One “work term” could be eligible for substitution by a volunteer experience, as long as CECS and the relevant Faculty have verified that there is opportunity for appropriate experiential learning. Such experience should be considered with particular regard to not-for-profit organizations, and in exceptional situations for for-profit organizations, if there is assurance that the student volunteer is not replacing an existing paid position, and will not be doing a normally paid job.*

**Recommendation 18:** *Where it is judged appropriate to continue using work-term reports, Faculties or Departments should (1) provide written guidelines specifying expectations of the work-term reports, (2) ensure that critical reflection is included in the reports, and (3) ensure consistent evaluation of the reports. If reflection is completed in another way, then work-term reports could be used for other purposes.*

*The overriding goal related to evaluating learning during work terms should be critical reflection by each student. In that context, critical reflection should include applying classroom learning on the job, assessing one’s career choice, exploring career choices, learning expectations of employers, and developing interpersonal skills.*

#### **(4) Jobs of Sufficient Quantity and Quality for Students during Co-op Work Terms**

**Recommendation 8:** *UW only continue or expand existing plans, or add new co-op plans, when it can be established by CECS, in consultation with Faculties, that there is work experience of sufficient quantity and quality, or alternative experiential learning opportunities, to ensure high-quality work-integrated learning. CECS also should be consulted when academic units are determining how many international visa students will be included in co-op plans. This requires that CECS be involved, early in the process, in any proposals by a Department, School or Faculty for a new or expanded co-op plan, and that such proposals be approved by the Co-operative Education Council before they are submitted to Senate Undergraduate Council.*

*CECS, in consultation with the Faculties, monitor all existing co-op plans to verify that they are sustainable in terms of providing high-quality work experiences from the first to the final work term. The findings from monitoring quantitative patterns should be reported annually to the Co-operative Education Council, while aggregate quantitative results, provided by CECS, combined with qualitative analysis, should be included in the academic program review self-study reports completed on a 7-year cycle. Where plans are not sustainable regarding quantity or quality of work experience, adjustments should be made related to enrolment, number of work terms, or other relevant aspects, or resources provided to CECS from appropriate academic units or other sources.*

**Recommendation 12:** *All Faculties and CECS have a responsibility to work with each other to generate a sufficient number of jobs of suitable quality for their students, and to help students be well prepared when applying for jobs. Each Faculty, working with CECS, should prepare a strategy as to how these quantitative and qualitative needs will be satisfied, and report on a bi-annual basis to the Co-operative Education Council regarding action and progress.*

#### **(5) External and Internal Partnerships**

**Recommendation 32:** *A new group should be created to provide advice to CECS and Faculties related to employers' needs and changing patterns of recruitment and hiring related to work opportunities for co-op and regular students. Emphasis on membership should be for people having expertise related to labour trends and demographics, and hiring practices.*

**Recommendation 43:** *CECS and other recruitment groups at UW should develop an integrated marketing plan for co-operative education, and for specific co-op plans. The involvement of Faculties and academic units must be made explicit in this overall marketing plan.*

*Marketing material prepared for prospective students should ensure that students and their parents have realistic expectations about the co-op experience at UW. One aspect to create realistic expectations is to provide one or more metrics about employment experience of co-op students.*

#### **(6) Effective, Efficient and Transparent CECS Services.**

**Recommendation 1:** *CECS should develop a clear mission statement to define its roles and functions, define clearly its relationships with partners, and determine criteria and indicators to monitor its success in achieving them.*

**Recommendation 9:** *In assessing success in providing sufficient work-term opportunities, the Executive Director should develop indicators. It is suggested that attention be given at least to (1) employment, at end of classes for the previous term, regarding the next work term, (2) employment at the start of the work term, (3) employment in the eighth week of the work term, and (4) quality of the work experience. The goal should be to achieve continuous improvement with reference to all four categories.*

**Recommendation 46:** *CECS produce an annual statement of service, published on its web site, providing sufficient details on the CECS operation so that co-op students can have a better understanding of services covered by the co-op fee. The report should include the general principles underlying the CECS service. Steps will need to be taken to remind all co-op students that the statement is available. Publicity material to potential students will also need to provide information about CECS and the co-op fee.*

*The co-op fee continue to be assessed as an “all-pay” fee. This principle will need to be included in the annual report produced by CECS.*

*The Executive Director of CECS make a presentation to the Provost’s Advisory Committee on Student Fee (PACSF) in the fall term each year regarding the activities and expenses of CECS in the prior year and the plans for the upcoming fiscal year. The impact of any changes on the co-op fee will be part of the presentation.*

*UW, in consultation with students, revise the co-op fee-setting mechanism (including graduate plans where appropriate) to establish a starting base budget for CECS (excluding Career Services) with a corresponding co-op fee. Future increases should be based on CPI (Consumer Price Index) plus an amount for salary increases plus an amount required to increase/improve services as presented to the PACSF. Increases above the CPI and/or salary increases should be reviewed by the Co-op Education Council prior to being sent to the PACSF.*

**Recommendation 11:** *Regarding the job management process, UW should advise students in writing about the degree of personal accountability. If, in the opinion of CECS, a student has not shown him or herself to be fully committed to the job placement process, further support in finding work will not be offered. In particular, students should not have unrealistic expectations related to job types, location of jobs, or remuneration, although special personal circumstances should be recognized. Furthermore, the UW calendar should reflect the degree of personal accountability required of co-op students, and the expectation of their full engagement in the search process.*

*Before participating in the CECS job match process, all co-op students have a responsibility to be prepared related to job search techniques, resume writing, interview skills, etc. Engineering students should receive this preparation through GENE 10, whereas students in other Faculties should receive it through a revised, compulsory Co-op 101.*

**Recommendation 35:** *The JobMine team, involving staff from IST and CECS, continue to improve the JobMine system, with particular attention to concerns identified by employers and students.*

**Recommendation 36:** *All Coordinators should receive on-going training on the JobMine system, in order that they can provide continuous advice about it to employers. Every employer be given the opportunity to have a Coordinator provide hands-on advice related to JobMine.*

## 1. PURPOSE

The University-wide programs of co-operative education and career services, as well as the Department of Co-operative Education & Career Services (CECS), have never been comprehensively reviewed, although in 1989 a committee evaluated how well CECS was fulfilling its mandate (Presser et al., 1989), in 1995 a working group examined co-operative education as part of the Fifth Decade Plan process (University of Waterloo, Working Group on Co-operative Education for the Commission on Institutional Planning, 1995), and in 2002 a private firm completed a survey of co-op employers (Metroline Research Group Inc., 2002).

The understanding and the practice of both co-op education and career services have changed dramatically. There also have been changes in the job market as well as in the needs and expectations of many students. It is critical for the health of the University to understand the place and role of both co-operative education and career services within the University's overall mission. In addition, in recent years, many more universities and colleges have incorporated co-op programs, resulting in much more competition for work opportunities for UW students at a time when enrolment at UW has been increasing and the job market in some sectors has become softer. Thus, the status quo is unlikely to result in UW continuing to be a global leader in co-operative education – hence the motivation for a review to determine actions to maintain Waterloo's leadership position.

This review was initiated as a result of a decision by senior managers that co-operative education at UW needs to be revitalized and enhanced, so that UW can be one of the leading “co-op” universities in the world. The overall purpose has been to review the University-wide programs of co-operative education and career services, and the Department of Co-operative Education & Career Services (CECS) as the primary academic support unit, in order to:

- (1) clarify the philosophical underpinnings of co-operative education and career services at UW,
- (2) identify the opportunities and challenges facing the programs and CECS, especially the relationships of CECS with other UW departments, and
- (3) provide recommendations to the senior administration of the University for the direction of the overall programs and CECS during the next 10 years, and to anticipate conditions and needs in 2015.

Two aspects are given attention: co-operative education, and career services. Each is reviewed at two levels: (1) University-wide programs, and (2) CECS effectiveness. The process used to conduct the review is outlined in Appendix 5.1.

## 2. CONTEXT

### 2.1 Co-op at Waterloo

When the University of Waterloo (UW) was established in 1957, the concept of co-operative education (co-op) was a founding feature, all students were in co-op, and UW was the first university in Canada to establish co-op academic plans. Since then the co-operative plans have grown to encompass almost 50% of the full-time undergraduate student population at UW, with 11,586 students registered during Fall 2004 in more than 100 plans across all six Faculties (Table 1). UW maintains relationships with more than 3,000 employers, and has 3,500 to 4,500 students looking for employment each term. UW is reputed to have the largest university-based co-op program in the world.

Co-op education is now a well-established education model in Canadian higher education (with more than 100 universities and colleges offering co-op in 2005). In Ontario, by the fall term 2004, every four months about 10,000 students from 28 universities and colleges were moving back and forth between on-campus studies and the work place environment.

#### **Co-operative Education approaches 100<sup>th</sup> anniversary**

The 2005-06 academic year will mark the 100<sup>th</sup> anniversary of cooperative education. Educational institutions throughout the world now use this education strategy which started as a somewhat controversial experiment in a small engineering college in the United States. .... Cooperative education's odyssey was launched in 1906 by Herman Schneider, an engineering professor (and later engineering dean and university president) at the University of Cincinnati.

Sovilla and Varty, 2004: 3-4.

#### **Early Adopters of Co-operative Education Plans**

1906 University of Cincinnati  
1909 Northeastern University, Boston  
1910 University of Pittsburgh  
1911 University of Detroit  
1912 Georgia Institute of Technology, Atlanta  
1912 Rochester Institute of Technology  
1914 University of Akron  
1918 Marquette University, Milwaukee  
1919 Drexel University, Philadelphia  
1919 Massachusetts Institute of Technology

University of Cincinnati, Public Information Office.



Table 1: **Enrolment in Co-operative Education at Waterloo, by Faculty**

Faculty	Year Co-op started	Enrolment in Co-op in the initial year	Enrolment in Co-op in 2004-2005 <sup>3</sup>
Engineering	1957	91	4,127
Science	1963	19	1,021
Mathematics <sup>1</sup>	1964	100	3,136
Applied Health Sciences	1967	148	699
Environmental Studies <sup>2</sup>	1967	36	958
Arts	1975	8	1,301
Software Engineering	2001	102	374
Total			11,586

<sup>1</sup> The Faculty of Mathematics was established in 1967. Before that, Math was within the Faculty of Arts.

<sup>2</sup> When Environmental Studies was established in July 1969, Architecture, established in 1967, became one of the four founding academic units. Effective May 2005, Architecture was moved to the Faculty of Engineering. Since the data in this table are for Fall 2004, Architecture numbers are reported in the Faculty of Environmental Studies.

<sup>3</sup> These figures are Fall 2004, full-time registered students, plus those scheduled to be on work-term in the Fall 2004 term.

Between the 1998-1999 and 2004-2005 academic years, the annual percentage of full-time undergraduate students in co-op ranged between 47 and 53, with most years close to 51% (if we measure full- and part-time students, the average percentage in co-op is about 49%). Co-operative education is compulsory in Accountancy, Architecture and Engineering. In other academic units, students have the choice of co-op or regular plans. In Optometry, students receive clinical experience, which is not labelled as co-op work experience.

Graduate student involvement in co-op has been much more limited. Ten plans at UW had some kind of formal work term or internship option in the late 1990s (Rowe, 1999). Much variation existed. As Rowe (1999:1) observed, “there were many students enrolled in programs which included relevant work experience: some were in formal co-op programs, others were in programs with required internships, practicums, or work terms not officially viewed as co-op programs, and many others spent a term or more working in various laboratories, industries, or field settings.”

By the fall term 2004, UW had 17 graduate plans with co-op options, with 54 students enrolled. These included plans in Biology, Chemical Engineering (now discontinued), Chemistry, Civil Engineering, Computer Science, Economics, English, Electrical and Computer Engineering, History

(Public), Management Sciences, Mechanical Engineering, Physics, Political Science, Sociology, Statistics, Systems Design Engineering, and Vision Science.

Offering co-operative education plans costs UW about 20 percent extra in teaching and teaching-related costs, which translates into an extra \$14 million to teach courses for 3 terms annually, and a further \$11.9 million in annual operating costs. In addition, the annual cost of operating the Department of Co-operative Education and Career Services is about \$8 million, depending on which aspects are included. Later in the report, more information is provided about the cost of operating co-operative education at UW.

Co-op students offset their costs of study by earning salaries on their work terms. It is estimated that in 2001 co-op at UW saved the provincial government about \$26 million annually because fewer co-op students at UW take loans (about half that of regular students). Those who do take loans need only 77 percent of the per capita amount for their regular counterparts. Waterloo students also have the best student loan repayment rate in the province. Furthermore, co-op students enjoy a starting salary premium after graduation, typically earning an average annual salary \$5,000 to \$10,000 higher than non-co-op graduates. Finally, a recent survey of graduates completed by the provincial government showed that co-op graduates have a slightly higher initial employment rate (97.6 percent compared to 96.6 percent) and, more significantly, are more likely to be employed in permanent positions (91.1 percent compared to 77.9 percent). This information all relates to the situation in the past several years.

## **2.2 Career Services at Waterloo**

Thirty years ago, the career services and graduate placement activity were incorporated into the original Co-ordination department, and the department was renamed Co-operative Education & Career Services (CECS).

Career Services serves the entire UW student community and alumni. The mission of Career Services is to provide career education, motivation and support via workshops, events, individual appointments and resources; to partner with employers to advertise part-time, summer volunteer, contract and permanent work opportunities; and to develop mutually beneficial relationships with students, alumni, staff, faculty and administrators. Its Career Development Manual ([www.cdm.uwaterloo.ca](http://www.cdm.uwaterloo.ca)) has received international recognition and is regularly sought by companies as a tool to provide career development programs for employees.

In 2003, 2,666 students attended the regular workshop series, up 140% from 2000. In terms of individual appointments, there were 2,013 in 2003, up 167% from 1999. Regarding job listings, 46 employers held on-campus interviews in 2003 which was down 79% from 2001, and 342 jobs were posted in 2003, down 62% from 2001. The latter number contrasts with the 10,000+ jobs found for co-op students.

Information provided by Career Services indicates that for the past several years up to 60 percent of students entering university are undecided about their academic major or career choice, and retention is higher for students who have some career direction. Also, a university applicant survey in 2003 indicated that “finding employment after graduation” continued to be the largest concern for university applicants, followed by completing degrees, getting required courses, and having access to faculty. These findings indicate the significance of the career services function for UW.

On 13 October 2004, the *Globe and Mail* published a survey of Canadian universities conducted by The Strategic Counsel. In that survey, UW scored highly on indicators related to preparing students

for careers, receiving an A+ for “reputation of the university among employers”, A- for each of “overall quality of career preparation” and “employment preparation”. It also received B+ for “availability of on-campus recruitment by employers”, and B- for “career counselling/placement services.”

Career Services indicates that its purpose is to educate and motivate all UW students (regular and co-op) to develop and take action to achieve current and future career goals. Another service unit, Counselling Services, notes that it provides assistance to students, faculty and staff about personal concerns, educational and career directions, and approaches to studies and exams. Given that Career Services highlights its role regarding current and future career goals, and Counselling Services highlights its role regarding educational and career directions, there is opportunity for synergy between the two units, and also potential for actual or perceived overlap in service provision. This is considered later in this report.

### **2.3 Present Situation**

Waterloo has much to be pleased with regarding the present situation. Many academic plans are acknowledged to be excellent and, because of their reputation, attract outstanding students. Students understand that a co-op experience enhances their academic learning, and usually leads to a premium salary after graduation. A wide and deep pool of students is attractive to employers, who confidently expect that co-op students and graduates will make strong contributions to their operations. Many employers have been associated with Waterloo for decades, understand the basic principles of co-operative education, and continue to hire students even during downturns in business cycles. With its long experience with co-operative education, the concept of work-integrated education is well established and recognized at Waterloo, and is a part of the institutional culture on the campus. A large and committed academic support unit, and a dedicated building, provide professional support to employers, students and Faculties. The staff in CECS, and others at UW, also often play major leadership roles in national and international co-op organizations. And, Waterloo continues to innovate related to work-integrated learning, such as when introducing academic credit for work terms, and encouraging students to have non-traditional co-op work experience.

Career Services has an excellent reputation among those students (co-op and regular) and alumni who use its services. Its *Career Manual* has been adopted by post secondary institutions, companies and other organizations because of its high quality. And, while providing key services to all students, it also plays a key role in supporting students in co-op plans.

Notwithstanding these positive features, however, co-op and career services each has issues or challenges that require attention. Some are focused on CECS itself, while others require action by Faculties, the University, students and employers. Specific issues are noted in the next two sub-sections.

### 2.3.1 *Co-operative Education*

#### *Students expect*

- the number and quality of employment opportunities to be increased,
- Faculties' requirements regarding work-term reports to be explicit and clear,
- the job matching process to be effective and efficient, and
- the rationale and cost of services provided by CECS to be transparent.

#### *Employers expect*

- in addition to high-level disciplinary and/or professional skills, student employees to have excellent work-place skills,
- student employees to have a good appreciation of appropriate behaviour in the work place, and
- the job matching process to be user friendly.

#### *CECS staff expect*

- needs and priorities for students and academic plans to be clear regarding support required from CECS,
- timely opportunity to be provided to participate in determining admission targets when expanding existing plans or developing new plans,
- timely opportunity to be provided to participate in the assessment of work opportunities when new plans are being considered,
- sufficient funding to support expected services to be available, and
- there be commitment to review and modify existing CECS practices.

#### *Faculties expect*

- CECS services to be developed or modified through systematic consultation with Faculties, Departments, Schools or UW Colleges,
- the co-op employment system to provide quality jobs of sufficient quantity,
- the roles of the Coordinators in CECS to be reviewed, and
- Faculties and CECS attempt to reduce stress on co-op students during both academic and work terms.

#### *The University expects*

- the ideals of co-operative education to be foundations for co-op at UW,
- the co-op employment system to provide quality jobs of sufficient quantity,
- the partnership between CECS and the Faculties and Colleges to be strong and robust,
- marketing of co-op to be integrated with other UW marketing activities,,
- CECS to have a strategic plan as the basis from which to allocate its resources, and
- sufficient funding to be provided, while maintaining a competitive position in terms of costs to co-op students.

### 2.3.2 *Career Services*

*Students* expect

- the relative roles and functions of Career Services and Counselling Services to be clear,
- the services for regular students to be more visible, and
- the rationale for the package of programs from Career Services to be transparent.

*Faculties*, especially those with a significant proportion of regular students, expect

- Career Services to provide the needed support to regular students as well as to meet the specific needs of co-op students, and
- Career Services to provide support to students seeking jobs at graduation.

*Career Services staff* expect

- the role of Career Services to be more visible across the campus with all stakeholders and especially with regular students.

The *University* expects

- the relationship between Career Services and Counselling Services to be clear, and
- the Career Services profile to be raised so students who could benefit from its services use them.

## 2.4 **Looking to the Future**

Many would argue that co-operative education is one of the defining features of the University of Waterloo, and has contributed significantly to its reputation of being exceptionally innovative and entrepreneurial. The Review Committee agrees with this assessment, and believes that (1) co-operative education should continue to be core to the brand of UW, and that (2), as part of its overall goal of achieving excellence, UW should continue to strive to be the international leader in co-operative education. In addition, the Committee also believes that Career Services should be focused and structured to reflect the reality that it operates in a co-op oriented university.

Given that many different versions of co-operative education exist, it is difficult to make direct comparisons with other post secondary institutions related to co-operative education. Thus, benchmarking to establish excellence is a challenge. Notwithstanding that difficulty, the Committee believes that, looking to the future, the University of Waterloo should aspire to set the highest possible standard related to co-operative education, and to be a model against which other institutions will measure themselves. In that spirit, the Committee believes that co-operative education at UW should:

- offer academic plans of outstanding quality,
- cultivate co-operative education as fundamentally an educational experience,
- provide sufficient, high-quality work experiences for students,
- ensure key partnerships (*external*: University, employers; *internal*: Faculties, CECS, students) are robust and strong, and,
- offer effective, efficient and transparent services.

The Committee believes that the University of Waterloo should have equally high expectations of

Career Services, and that its service should be delivered to all students (regular and co-op) and alumni. However, the Committee also believes that it should be closely associated with Co-operative Education, because of the dominant role of co-operative education at UW. In that context, even though the sizes of the two units are significantly different, they should operate in a close proximity since many of the services provided by Career Services are essential for Co-operative Education. As a result, the Committee believes that Career Services at UW should:

- provide all students (co-op and regular) with access to their services,
- offer services explicitly designed to meet the needs of co-op students, and also,
- offer services to alumni.

In the following Sections, the Committee provides its analysis and recommendations which it believes will allow the University of Waterloo to achieve excellence in co-operative education and career services, and excellence by the Department of Co-operative Education and Career Services.

### 3. SIGNIFICANCE OF CO-OPERATIVE EDUCATION FOR WATERLOO

An important element of the ‘brand’ or reputation of UW is co-operative education, as noted in the quote in the accompanying text box, from Macleans magazine.

The overall significance of co-operative education for the University of Waterloo is captured well in *Building on Accomplishment*, the Fifth Decade Plan for the university (Commission on Institutional Planning, 1997):

#### **UW Brand**

As it stands, only a handful of Canadian universities can boast a well recognized brand. Waterloo is a perfect example, broadly perceived as an innovative leader in co-op and a hothouse of computer wizardry.

Dowsett Johnston, 2003

At the heart of UW’s distinctiveness is a culture of learning by linking to the “real world” which influences nearly everything the university does, flavouring the conventional education of students at all levels – undergraduate, graduate, and professional. The principal expression of this culture is the largest and most comprehensive co-operative education program in the world. On this firm foundation, UW builds many other bridges to society, the nation, and the world. (page 5)

Co-operative education has been a defining feature of the University of Waterloo from its founding. Co-op gives students the opportunity to integrate classroom learning with relevance to society’s needs through practical experience in the workplace.

....There are five partners in the co-op learning experience – students, employers, faculty members, the Department of Co-operative Education and Career Services (CECS), and the university administration. To sustain co-op’s success, all five partners must be actively committed to the philosophy of experiential learning, the responsibilities of the five partners must be clear, communication links among the partners must be open and strong, and CECS must have adequate resources and streamlined operational procedures to function effectively in the work world of the twenty-first century. (page 23)

In 2005, many faculty and staff at UW would add a sixth partner to those listed above. In addition to students, in many cases there now also are parents.

The potential benefits of co-operative education have been summarized by the National Commission for Cooperative Education (1995) (Table 2).

Table 2: **Valued Outcomes from Co-operative Education**

<b>STUDENT OUTCOMES</b>	
<p><b><u>Academic</u></b>                      Ability to integrate classroom theory with workplace practice                      Clarity about academic goals                      Academic motivation                      Technical knowledge through use of state-of-the-art equipment</p>	<p><b><u>Professional</u></b>                      Clarity about career goals                      Understanding of workplace culture                      Workplace competencies                      New or advanced skills                      Career management                      Professional network                      Post graduation employment opportunities</p>
<p><b><u>Personal</u></b>                      Maturity                      Determination of strengths and weaknesses                      Development/enhancement of interpersonal skills                      Earnings to cover university expenses or to support personal financial responsibilities                      Productive and responsible citizenship skills                      Lifelong learning skills</p>	
<b>EMPLOYER OUTCOMES</b>	
<p>Well-prepared short-term employees                      Flexibility to address human resource needs                      Cost-effective, long-term recruitment and retention                      Access to candidates with sought-after skills and/or background</p>	<p>Increased staff diversity                      Partnerships with schools                      Input on quality and relevance of school's curricula                      Cost-effective productivity</p>
<b>UNIVERSITY OUTCOMES</b>	
<p>Recruitment of new students                      Retention of current students                      Wider range of learning opportunities for students                      Enriched curriculum                      Enhanced quality of graduates with sought-after skills and/or background                      Enhanced reputation in the employer community</p>	<p>Improved rate of employment of graduates                      Increased alumni participation (hire students, contribute funds, etc.)                      Partnerships with business, governments, and community organizations                      Increased external support by corporations, foundations and government grants</p>
<b>SOCIETAL OUTCOMES</b>	
<p>Established model for workplace preparedness                      Income tax revenue                      Reduced demand for student loans</p>	<p>Productive and responsible citizens                      Industry-education partnerships</p>

Modified after: National Commission for Cooperative Education, March 1995

Related to the above statement from the Fifth Decade Plan, and the benefits described by the National Commission for Cooperative Education, UW highly values the following characteristics of



co-operative education (Wilson, 2002:8; Coll and Eames, 2004: 275; Groenwald, 2004: 22; Sovilla and Varty, 2004: 10):

- students engaging in critical thinking and transformative learning,
- constructive interaction between academic faculty and co-op staff; intervention to enhance student learning; and experimentation in both form and content related to learning, and,
- mentoring or supervision of students; monitoring of the experiential learning; facilitating reflection of the experiences of students in order to optimize the learning; and, assessing the learning by students derived from the experiential placement.

Given the above values and benefits of co-operative education, it is important that the roles of different partners are recognized and understood. At a minimum, the Committee believes that key roles include:

### **Co-operative Education and Career Services**

- Monitor trends in the labour market and demographics
- Assess job possibilities when new academic plans are being developed
- Assist students in preparing for work terms (resumes, interviewing skills, employer expectations)
- Identify and screen jobs
- Cultivate job opportunities
- Help others to develop and cultivate jobs
- Ensure job descriptions are complete and appropriate
- Facilitate matching process between students and employers
- Provide support to students and employers during work terms
- Evaluate employer assessment of students

### **Faculty**

- Create challenging and relevant curricula
- Participate in assessing appropriateness of jobs for students
- Understand the learning experiences of students during their work terms
- Integrate work-term experiences into courses
- Participate in evaluating work-term experience by students
- Nurture relationships with existing employers, and help to identify and cultivate new employers

### **Employers**

- Provide complete and accurate job descriptions
- Provide jobs or positions with good learning opportunities
- Ensure appropriate supervision of students on work terms
- Participate in the evaluation of students' work-term performance
- Provide input regarding curriculum revisions

### **Students**

- Provide complete and accurate resumes
- Be well prepared for job interviews
- Be flexible and adaptive relative to work-term location
- Critically reflect on work-term experience in the context of academic studies
- Behave professionally on the job (maintain a high standard of behaviour)
- Provide valuable service to employer
- Help employer to achieve company or organizational goals

In the context of the above, it is important that the role and functions of CECS relative to other partners be clear.

***Recommendation 1: CECS should develop a clear mission statement to define its roles and functions, define clearly its relationships with partners, and determine criteria and indicators to monitor its success in achieving them.***

Given the importance of co-operative education for Waterloo, four initiatives, outlined below, should be taken to emphasize its significance at UW.

### **3.1 Coordination and Collaboration between CECS and Faculties**

Many matters require attention in each academic plan, and in each Faculty, related to co-op. These include ensuring that new faculty understand their role in a co-operative education academic plan, providing oversight related to the way in which connections are made between the academic and work-place experiences, monitoring the success of students finding employment for work terms, developing and enhancing activities related to academic credit for work terms, and determining the most effective way to assess the work-term experiences. In addition, a critical task is cultivating relationships with current and potential employers of undergraduate students.

There should be a designated person in each Faculty with responsibility for co-op education, so that there is one contact point for CECS and other partners. In some Faculties, this now is the Associate Dean of Undergraduate Studies, but some Faculties have other arrangements. One common approach is unlikely to be appropriate for all Faculties, but it is essential that there be a person with responsibility for co-op in each Faculty, that this role have a significant profile, and that the person in the position devote significant time to the necessary tasks. In some Faculties, especially those in which all or a large proportion of undergraduates are in co-op plans, this should be a new position of Associate Dean, and include Co-operative Education in the title, to highlight the importance of co-op and to recognize that the Associate Dean, Undergraduate Studies, may have too many other duties to be able to allocate sufficient time to co-op issues. Furthermore, given the critical importance of co-op to Faculties such as Engineering and Mathematics, creation of an additional Associate Dean position, whose mandate would include Co-operative Education, will provide a clear signal that those Faculties recognize the importance of co-operative education. In some Faculties, it may make sense to combine responsibility for co-op with some other tasks.

***Recommendation 2: Each Faculty identify a faculty or staff member who has lead responsibility for co-op education, and give that person a highly visible role and position. Where the work load will be significant because of a large number of students in co-op, this position should be at the level of Associate Dean. If appropriate, responsibility for co-operative education could be combined with other responsibilities.***

### **3.2 Co-operative Education Council**

Given that a partnership is essential for co-operative education, academic units and CECS would benefit from oversight from a group representing the different UW stakeholders involved in co-op and career services. A Council would be a forum to (1) share current experience and practice, as well as (2) monitor best practice in order to identify opportunities for University-wide and Faculty initiatives, and (3) approve new plans with a co-op component.

Care will be needed to ensure that such a Council does not overlap with the Undergraduate Operations Committee, consisting of the Associate Deans of Undergraduate Studies. This can be addressed by the two groups exchanging meeting agendas and by the respective Chairs staying in contact about issues to be addressed by the two groups. In addition, the Executive Director of CECS is a member of both groups, which will further help in strengthening linkages.

A priority for the Council initially should be to determine how to strengthen links between the academic plans and the services provided by CECS. In the medium term, the Council could take the lead responsibility for some items, and/or could monitor progress in implementing recommendations from this report.

After experience has been gained, a decision will need to be taken regarding whether this Council is the appropriate forum to provide oversight for matters related to Career Services, or whether a separate group should be formed with regard to Career Services.

The membership of the Council should include one member from each Faculty, two staff from CECS, three students and a non-Waterloo employer. Initially, the Chair of the Council should be the Associate Provost, Academic and Student Affairs. Once the Council is operational, the role of Chair should rotate among the six Faculty representatives, for a period to be determined.

The Council should be accountable to the Associate Provost, Academic and Student Affairs.

***Recommendation 3: A Co-operative Education Council be established, with membership from each of the Faculties, CECS, students (the latter to be determined by the FEDs President or Vice-President Education), and one non-UW co-op employer, and be accountable to the Associate Provost, Academic and Student Affairs.***

### **3.3 Mentoring New Faculty and Staff related to Co-operative Education and Career Services**

Most new faculty at UW have not come from universities in which co-operative education is so central to the mission of the institution. Many also are unfamiliar with the role of Career Services.

As a result, Departments, Schools, Faculties, Colleges and UW all have responsibility to ensure that faculty understand the basic principles of co-operative education, in order that they can facilitate critical reflection by students related to work experiences, and also assist in identifying work opportunities for students. In addition, they need to be aware of the support Career Services offers to students. The same comment applies to new staff. Indeed, the external review team commented that UW should do more to ensure new faculty and staff orientations include references to the role of co-op as it relates to the overall direction of the University, and that new faculty and staff are encouraged to participate in co-op by providing job leads, employing co-op students in their research programs, and incorporating co-op experiences when teaching.

One of the duties of the Assistant Directors of CECS is to meet with new faculty to brief them about co-op and career services. This is done by giving a presentation (referred to as CECS 101) to groups of new faculty, or through one-on-one meetings. However, no records are maintained regarding how many new faculty are contacted through CECS 101. In addition, all new faculty receive a binder within 2 to 3 weeks of arriving at UW, which provides information about many aspects of UW, including CECS.

UW should systematically provide basic information sessions regarding co-operative education

and career services during orientation sessions for new faculty, and Faculties and Departments should determine what additional plan-specific information should be provided. Chairs/Directors should emphasize that involvement in co-op by faculty is recognized as “service” activity for annual performance reviews. Also, systematic records should be kept by CECS, to ensure that all new faculty are briefed about co-op and career services.

***Recommendation 4: When new faculty are hired, the significance of co-operative education at UW should be mentioned in the appointment letter.***

***UW, Faculties, Colleges and Departments/Schools should establish a coordinated approach to providing information to new faculty to help them understand the nature of co-operative education and career services, and their role to support students in co-op plans, and advise students about Career Services. Specifically, during the new faculty orientation activities at the beginning of each academic year, a workshop should be provided in which the basic principles of co-operative education are reviewed, the importance of evaluating the work-term experience is highlighted, opportunities for incorporating work-term experience into subsequent courses are assessed, and alternative methods of review are explained.***

### **3.4 UW 50<sup>th</sup> Anniversary in 2007: Event to Celebrate Co-op**

In 2007, UW will celebrate its 50<sup>th</sup> anniversary, and in 2005-2006 co-op will mark its 100<sup>th</sup> anniversary since being started in the United States. Given the prominence of co-op for UW, this will be an excellent occasion for a hallmark event to highlight co-op. Various events could be organized, ranging from a conference to recognize the key role of employers in co-op, an event focused on alumni accomplishments and roles as employers of co-op students, to a documentary film about co-op.

***Recommendation 5: UW should include a hallmark event focused on co-op education during the 50<sup>th</sup> anniversary celebrations in 2007. The Executive Director, in consultation with the Faculties, should recommend the most appropriate event.***

## **4. ISSUES, CHALLENGES AND OPPORTUNITIES**

### **4.1 Overview regarding Work-Integrated or Experiential Learning: Co-op, Internships, Service Learning**

#### ***Co-op***

Co-operative Education has been defined by the National Commission for Cooperative Education (2002) as:

... a structured educational strategy integrating classroom studies with learning through productive work experiences in a field related to a student's academic or career goals. It provides progressive experiences in integrating theory and practice. Co-op is a partnership among students, educational institutions and employers, with specified responsibilities for each party.

The Canadian Association for Co-operative Education (2000: 1) [CAFCE] elaborates by defining co-operative education as:

... a program that formally integrates a student's academic studies with work experience with participating employers. The usual plan is for the student to alternate periods of experience in appropriate fields of business, industry, government, social services and the professions in accordance with the following criteria:

- (i) each work situation is developed and/or approved by the co-operative educational institution as a suitable learning situation;
- (ii) the co-operative student is engaged in productive work rather than merely observing;
- (iii) the co-operative student receives remuneration for the work performed;
- (iv) the co-operative student's progress on the job is monitored by the co-operative educational institution;
- (v) the co-operative student's performance on the job is supervised and evaluated by the student's co-operative employer;
- (vi) time spent in periods of work experience must be at least thirty percent of the time spent in academic study.

This approach to education relies upon a three-way partnership: the student, the institution, and the employer. Success depends upon the co-operative efforts of each party.

The Government of Ontario, through Regulation 330/97, amended as Ontario Regulation 268/00, has defined co-operative education in a manner consistent with the above interpretations (Appendix 5.4).

#### ***Internships***

The difference between co-op and internships is explained by Groenwald (2004: 19-20): "...cooperative education is inherently developmental, in that students apply what they are learning as they are learning it. Internships, on the other hand, are experiences of a predetermined duration, for example, one semester. Cooperative education programs are further characterized by progressive responsibility and are seen as a series of structured, systematically linked internship experiences in which the student gains progressive responsibility and progressive opportunity to apply academic work and gain specified competencies. Although cooperative education usually starts out early in the academic

program, internships tend to occur toward the end, almost like a ‘capstone experience’ of the entire program.” For example, Optometry students have a 4-month internship in the final year of their program.

Based on the distinction made by Groenwald between co-operative education and internships, virtually all ‘co-op graduate options’ at UW are internships.

**Service Learning**

Service learning is a third model or option of experiential learning. According to Strage (2000: 5), agreement exists about the core characteristics of service learning:

- (1) it includes high-quality service, in that the service must meet a goal defined by the community in which it is being performed;
  - (2) it provides the student an opportunity for high-quality learning, in that the experience must set the stage for intellectual and personal growth of the student, and learning outcomes assessment procedures must reflect the contribution which the service is intended to make to the course,
  - (3) the service and learning components of the course should enrich one another, meaning that students should be able to learn more or better by providing the service in question, and the caliber of the service being provided should be enhanced by what they learn in the course, and
  - (4) the service should be integrated into the course through reflective and integrative assignments.
- Research has shown that service learning contributes to fostering students’ civic responsibility, their acceptance of diversity, and their leadership skills as they move on to roles in their communities as committed and engaged citizens

**Community Service Learning**

Community service learning, or CSL, is a model for experiential learning in which community service is integrated with academic content. Whereas traditional co-op placements focus on developing students’ professional skills, CSL is designed to cultivate a sense of commitment to civil society and engagement with social issues.

Schwartz, 2004: 13.

In the United States, Marquette University distinguishes between service learning and volunteerism (Table 3). The differences should be recognized, given the possibility of co-op students having one work term served as a volunteer (see recommendation 14).

**Table 3: Service Learning and Volunteerism**

<b>Service Learning</b>	<b>Volunteerism</b>
Service done with student’s, agency’s and clients’ needs in mind equally.	Service done primarily with agency’s and clients’ needs in mind.
Tasks related as closely as possible to the student’s classroom theories (determined before service begins).	In general, volunteer temperament and abilities are matched with service tasks.
Server must reflect and focus on connections between service and course to get full benefit of service.	Server might reflect on impact of service to enhance appreciation of service.
“Service as a means to reach the end goal of learning.”	“Service for service sake.”

From Marquette University web site: [www.marquette.edu/servicelearning/](http://www.marquette.edu/servicelearning/)

The distinctions among co-op, internships and service learning highlight choices related to work-integrated or experiential learning. These options provide the context for opportunities, and the need for decisions, identified in the next section.

## **4.2 Enhancement Features and Opportunities**

### *4.2.1 Co-op, internships and service learning*

As noted in Section 3, an important element of the ‘brand’ or reputation of UW is co-operative education. The Review Committee concludes that, given the importance of co-operative education as one of the defining or distinctive characteristics, or brand, of UW, the University should focus its attention and energy on co-operative education in the short and medium term, to ensure that its claim to be a leader in co-operative education can be justified. It should *not* undertake at this time other experiential learning initiatives as a UW-wide strategy. Later, when evidence is clear that issues related to co-operative education have been dealt with, then UW may consider adding other forms of experiential learning as an explicit University-wide strategy. In the short and medium term, individual Departments, Schools or Colleges should be encouraged to enhance existing internships or service learning activities, and consider where they might introduce new pilot initiatives.

***Recommendation 6: UW should continue to emphasize co-op education over other forms of experiential learning, and should commit to have co-operative education continue to distinguish as well as define UW.***

***Recommendation 7: Other forms of experiential learning (internships, service learning) be encouraged and managed at the Department or School level, where appropriate, and be features of specific academic plans.***

### *4.2.2 Work-term placements: success in placements; number of work terms, when work terms begin in academic plans*

Success in finding sufficient jobs of acceptable quality for first-time co-op work terms always has been a challenge, but has become even more so since 2002. This challenge exists because of expansion of existing co-op plans and introduction of new ones at UW, competition from other universities and colleges which have introduced co-op at their institutions, and cutbacks by some employers.

Having sufficient jobs of adequate quality for co-op students is very important, since many students rely on the income from work terms to cover the costs of their education. Furthermore, sufficient jobs of good quality is a key component to sustain the credibility of co-op at UW. At the same time, as the external assessment team observed, there is a danger that a focus only on jobs can lead to a disconnect between co-op and learning. In their words, “we feel that the ‘education’ part of co-operative education has been somewhat lost.” In this context, they recommended a freeze on co-op growth until UW has determined how it will deal with both job creation and learning issues.

Finding jobs for students is a multi-dimensional challenge. A Working Group established in the winter term 2005 to examine first-time co-op job opportunities found that (1) the numbers of students without jobs by the 8<sup>th</sup> week of each work term since winter term 2002 has been undesirably high; (2) the total number of jobs available relative to the total number of students needing jobs is about equal, but about 75% of the jobs are identified as being for senior students, whereas 75% of the students needing

jobs are junior students. Furthermore, employers have a clear preference for senior students; (3) the current job matching process is “permissive”, resulting in some situations in which sufficient jobs exist, but some students are not employed because they will not accept jobs in certain locations; and, (4) regarding the length of time taken in the job match process for final decisions, some other universities make decisions much faster, and UW is losing jobs to students from other universities because employers become impatient waiting for a decision from UW.

Business cycles mean that there will always be periods during which finding jobs for students will be difficult. However, the downturns in business cycles are now exacerbated because of the much stronger competition from other universities with co-op plans. For example, because Carleton and Ottawa universities have expanded their co-op plans, UW now places about 250 students each year in Ottawa whereas at one time it placed well over 600. Ottawa employers often find it more convenient to hire students from Carleton and Ottawa, and also feel loyalty to local universities. Another complication is that other universities from across the country also compete for jobs in Ottawa, especially with the federal government. The same pattern exists in cities in Western Canada.

In addition to business cycles, other trends influence co-op. For example, driving forces related to jobs include the trend of small- and medium-sized firms becoming the main employers compared to large-sized firms, and the growing importance of the service sector relative to the manufacturing sector.

In terms of a response to this challenge, during 2002, 2003, and 2004, UW hired from 225 to 250 students each term. An average of 50 each term were in work-placement jobs. These numbers make UW itself one of the largest employers of co-op students.

Students in UW work-placement jobs, funded by tuition set-aside money, must be OSAP eligible. However, CECS and Student Awards indicate that only a small percentage of the unemployed co-op students at the beginning of the work term is OSAP eligible. For 2005-2006, 200 work-placement positions are available over three terms (spring, fall, winter). These have been allocated to Faculties and academic support units. In addition, various initiatives have been taken by CECS to generate more external jobs.

UW work-placement jobs, funded by set-aside money, were made available to Faculties and academic support units to help generate more job opportunities on campus. While it is reasonable to spend the accumulated surplus of student financial aid dollars on student jobs, the Student Awards and Financial Aid Office should strive to achieve full distribution of aid dollars based on UW unmet needs before allowing aid dollars to be directed toward funding UW co-operative work experience. The Committee recognizes that this issue is beyond its scope and mandate, but believes that it is important. As a result, the Committee urges the Co-operative Education Council to address this matter as soon as possible, with the goal to provide advice to the Provost.

The September 2004 report of the Task Force on Undergraduate Student Financial Support recommended that UW consider a guarantee for the first work term for students enrolled in co-op plans. The follow-up Working Group calculated that providing such a guarantee would be prohibitively costly, a conclusion subsequently accepted by Deans’ Council. To fund the students unemployed in the 8<sup>th</sup> week of the three terms in each of 2002, 2003 and 2004 would have required \$2.41, \$2.98, and \$2.76 million, respectively, beyond what had been provided for work-placement jobs. The Review Committee also recognizes that there is a limit on the number of first-term jobs that can be created on campus, and this ultimately creates a limit on what can be done to assist students, even if funding is allocated for this purpose.



Moving forward, the Review Committee believes that key goals or targets for jobs should be established, against which to measure future progress.

***Recommendation 8: UW only continue or expand existing plans, or add new co-op plans, when it can be established by CECS, in consultation with Faculties, that there is work experience of sufficient quantity and quality, or alternative experiential learning opportunities, to ensure high-quality work-integrated learning. CECS also should be consulted when academic units are determining how many international visa students will be included in co-op plans. This requires that CECS be involved, early in the process, in any proposals by a Department, School or Faculty for a new or expanded co-op plan, and that such proposals be approved by the Co-operative Education Council before they are submitted to Senate Undergraduate Council.***

***CECS, in consultation with the Faculties, monitor all existing co-op plans to verify that they are sustainable in terms of providing high-quality work experiences from the first to the final work term. The findings from monitoring quantitative patterns should be reported annually to the Co-operative Education Council, while aggregate quantitative results, provided by CECS, combined with qualitative analysis should be included in the academic program review self-study reports completed on a 7-year cycle. Where plans are not sustainable regarding quantity or quality of work experience, adjustments should be made related to enrolment, number of work terms, or other relevant aspects, or resources provided to CECS from appropriate academic units or other sources.***

With regard to Recommendation 8, it is difficult to prescribe exactly when “early in the process” should be, as that will depend on specific circumstances. However, the spirit of the recommendation is straight forward: CECS should have significant input when new plans are being conceived, or existing ones are being considered for expansion or modification. A key role for CECS should be to provide a thorough assessment of the job market, and to work closely with the academic unit to identify the work competencies expected of students, before a proposal for a plan is completed by an academic department or school.

***Recommendation 9: In assessing success in providing sufficient work-term opportunities, the Executive Director should develop indicators. It is suggested that attention be given at least to (1) employment, at end of classes for the previous term, regarding the next work term, (2) employment at the start of the work term, (3) employment in the eighth week of the work term, and (4) quality of the work experience. The goal should be to achieve continuous improvement with reference to all four categories.***

Identifying a specific institutional goal (e.g., percentage of students employed) relative to Recommendation 9 is a challenge, given business cycles and differences across academic plans. However, UW should always aspire to have a very high employment rate, with the ideal being 100 percent each term.

***Recommendation 10: Regarding job creation, UW and Faculties should designate a specified proportion of UW-funded work-term jobs for students beginning their first work term. The proportion may be variable across Faculties, recognizing that needs will vary. In parallel, CECS should endeavour to persuade employers to create and/or designate more first-time co-op jobs.***

Providing sufficient numbers of jobs for first-year students is important. However, of equal concern is quality of such jobs, since poor or low quality jobs can have as much negative impact for the reputation of co-op as insufficient jobs. In that context, Faculties and CECS need to identify and use mechanisms to verify the standard for and quality of jobs for co-op students.

Furthermore, while UW has a responsibility, through collaboration between CECS and the Faculties, to generate sufficient jobs of appropriate quality for students enrolled in co-op plans, students also have responsibility to help make themselves competitive job candidates. The Review Committee believes that all students should be required to take either GENE 10 or a revised Co-op 101 to improve their ability to get jobs. This will require revisions to the current Co-op 101, and, in doing that, Career Services should ensure it consults with Counselling Services and the Ombudsperson, as the latter has experience in helping students resolve difficulties encountered in the work place. In that regard, changes should be sought for several aspects. Specifically,

***Recommendation 11: Regarding the job management process, UW should advise students in writing about the degree of personal accountability. If, in the opinion of CECS, a student has not shown him or herself to be fully committed to the job placement process, further support in finding work will not be offered. In particular, students should not have unrealistic expectations related to job types, location of jobs, or remuneration, although special personal circumstances should be recognized. Furthermore, the UW calendar should reflect the degree of personal accountability required of co-op students, and the expectation of their full engagement in the search process.***

***Before participating in the CECS job match process, all co-op students have a responsibility to be prepared related to job search techniques, resume writing, interview skills, etc. Engineering students should receive this preparation through GENE 10, whereas students in other Faculties should receive it through a revised, compulsory Co-op 101.***

Recommendation number 11 will require specification of what reducing “considerable permissiveness” in the job placement process will involve. This operational matter should be clarified by the Co-operative Education Council. The Council should consider whether more information and education are needed to help students have realistic expectations, or whether UW should have a contract with all co-op students related to responsibilities on both sides.

Given the expectation of higher personal accountability by students, it is fair and reasonable that CECS and UW also be held to a high standard of accountability. In that regard, recommendations 3, 8, 9, 10, 12, 28 and 46 outline initiatives to ensure greater accountability by UW and CECS.

Another dimension in providing jobs for students relates to when they should begin their first work term. Wilson (2002:19-20) has offered the following view:

Typically, co-op is not introduced during students’ first academic year. The rationale is twofold. First, it is argued that students need that initial year to acclimate to college or university. Second, it is argued students are more placeable and will gain more from their work experience after having achieved relevant knowledge and skills in their field of study. Because of these arguments, the co-op experience is most often begun sometime during the second year of study. Occasionally it is not started until the third year, but this puts a strain on providing students with multiple periods.

UW encounters its greatest challenges in finding work for students to be placed during their first year in an academic plan. At the same time, some employers have indicated one aspect of co-op at UW that gives its students a real advantage in senior years is that UW students have more work-term experience than students from other universities, making them very attractive to employers. If UW were

to delay the start of the first work term, and thereby reduce the total number of work terms, our senior students would be less distinctive compared to co-op students from other universities. Furthermore, in Engineering there is a clear desire to maintain the early work terms as it is believed the opportunity to obtain high-quality work experiences in senior years increases for UW students when they have more work terms than co-op students from other universities. Furthermore, in Engineering the experience from the mid-point of the work-term experiences can be included when alumni apply for professional certification as professional engineers.

***Recommendation 12: All Faculties and CECS have a responsibility to work with each other to generate a sufficient number of jobs of suitable quality for their students, and to help students be well prepared when applying for jobs. Each Faculty, working with CECS, should prepare a strategy as to how these quantitative and qualitative needs will be satisfied, and report on a bi-annual basis to the Co-operative Education Council regarding action and progress.***

Employers also indicate that their preference is for more flexibility regarding length of work terms. Indeed, some evidence indicates that UW is losing co-op job opportunities to other universities which offer 8-month terms, or senior internships which can extend for more than one academic term. At the same time, it is appreciated that extra costs will be incurred in some plans by having 8-month terms.

***Recommendation 13: All academic plans offering co-op should seek to offer flexibility regarding length of work term, and UW should move toward providing both 4- and 8-month work terms, when appropriate. In this redesign, one of the basic principles of co-op education (systematic alternation of academic study and work experience) must guide any adjustments regarding length, mix and sequence of study and work terms.***

#### 4.2.3 *Alternative experiential learning*

In addition to the actions identified in Section 4.2.2, UW has another fundamental choice to help increase the work opportunities for co-op students: allow co-op work-term credit for a wider range of experiential learning activities. With regard to this option, attention should be given to the fundamental principle of co-operative education noted in Section 4.1. That is, the Canadian Association for Co-operative Education (2000: 1) defines co-operative education as "... a program that formally integrates a student's academic studies with work experience with participating employers," and that the alternate periods of work experience meet the criteria that each work situation is developed and/or approved by the co-operative educational institution as a suitable learning situation; the co-operative student is engaged in productive work rather than merely observing; and, the co-operative student receives remuneration for the work performed. In addition, UW needs to be aware of the provincial regulations for firms to receive a tax credit for employing co-op students (Appendix 5.4). The CAFCE definition and principles, and the Ontario government regulations, are very clear that co-op work terms need to have students engaged in actual work for remuneration. A further complication is that engineering students can apply to receive up to one year of work credit based on their co-op work experience to meet the requirements to become registered as professional engineers, and accountancy students do receive credit for their co-op work experience toward professional certification.

UW already is providing opportunity for different types of work experience. For example, as long as a job is judged to have appropriate learning opportunities, students in many plans can be given credit for a co-op work term by doing volunteer work. In such situations, they are engaged in productive work but not for remuneration, usually with a charitable or non-government organization which can offer an experience with real value for both the employer and student. A different situation is a student taking a work term with an organization such as Engineers Without Borders, in which there is productive work but

with significantly lower remuneration than would be obtained from a private or government employer. A challenge for UW, however, is that other “for profit” employers may also decide that they will offer only “volunteer co-op work” to students, which could erode the fundamental principle of co-op work being for remuneration.

Other types of experiential learning do not fit as comfortably within the category of an experience including “productive work”. For example, during the winter term 2005, Mechanical Engineering offered an International Training Program which provided a selected group of up to 28 students with exposure to engineering skills, including machining, welding, CAD, blueprint reading, metrology, and electric circuits and motor control. The program was based at the Thapar Institute of Engineering and Technology in Patiala, India. Coordinators appointed by the Chair of Mechanical Engineering accompanied the students. The program lasted for 8 weeks, and replaced the first work term on a trial basis. This initiative is intended to prepare the students for the global economy and expose them to experiences that inculcate practical hands-on skills, confidence, self reliance and appreciation for different cultures around the world. All of those are desirable competencies, but raise questions as to how far UW is prepared to stretch its interpretation regarding what activities receive credit for a co-op work term, particularly given that such terms also receive academic credit.

***Recommendation 14: One “work term” could be eligible for substitution by a volunteer experience, as long as CECS and the relevant Faculty have verified that there is opportunity for appropriate experiential learning. Such experience should be considered with particular regard to not-for-profit organizations, and in exceptional situations for for-profit organizations, if there is assurance that the student volunteer is not replacing an existing paid position, and will not be doing a normally paid job.***

***Recommendation 15: UW should develop a proposal to submit to the Canadian Association for Co-operative Education to modify the accreditation criterion related to work terms always resulting in remuneration to the students, in order that volunteer activity can be counted toward meeting the work term requirements for a co-op degree.***

#### 4.2.4 Learning outcomes: academic credit for work placements

Coll and Eames (2004: 275) have observed that “we do need to maintain clear *educational* goals in co-op. The objectives set for the co-op program and the work component should allow the student to engage in critical thinking and transformative learning. We recognize the tension that exists between the primary goals of academia (education) and industry (productivity), but we feel education must remain paramount.”

In the spring 2002, UW began awarding academic credit for work terms, as one way of highlighting that co-op work terms are an integral part of the learning by a student. When Senate approved, in winter 2002, academic credit for work terms, it was on the understanding that each Faculty would review its current practices related to work-term experience, and introduce new initiatives.

Engineering subsequently has introduced a PDEng program in which all engineering students will complete one academic credit course using on-line technology during each required work term. Such courses are in addition to the normal course load in Engineering. The intent in such courses is to focus on “soft professional skills” not covered systematically in the Engineering academic plans, to give the students opportunity to develop skills related to leadership, communication, etc. More specifically, the PDEng program focuses on key pillars of critical thinking, leadership and professionalism, in addition to a clear understanding of the workplace.

The other five Faculties are in the process of determining the initiatives that they will take, individually or collectively, to meet the spirit of the Senate approval of academic credit for co-op work terms. And, Arts has already obtained approval from Senate Undergraduate Council regarding its Co-op Enhancement being a degree requirement.

***Recommendation 16: By December 2005, the five Faculties that have not yet determined what extra activities will be introduced regarding academic credit for co-op work terms have detailed proposals submitted to Senate Undergraduate Council.***

***Recommendation 17: The coordination of providing the on-line courses for academic credit for co-op work terms in the five Faculties will be under the oversight of the Associate Provost, Academic and Student Affairs.***

#### *4.2.5 Evaluating learning during work terms: work-term reports; on-line work-term courses; eJournals/ePortfolios.*

Coll and Eames (2004: 272) concluded that “We see a core feature of co-op being integration: there *must* be integration between work and classroom learning.” Numerous ways exist to foster such integration: faculty incorporating students’ experiences into their lectures, debriefing of students when they finish a work term, students keeping a journal during the work term, and/or students completing a work-term report.

At UW, the primary method to integrate work and classroom learning is the work-term report. Ideally, such a report requires a student to reflect systematically and critically about some aspect of the work term, relative to classroom learning that preceded it. However, such critical reflection often has not been explicitly required, and has not occurred. In this regard, the external assessment team expressed concern about the education part of co-operative education, observed that the self-study reports completed by the Faculties as part of the review process were “mainly silent about learning from work”, and recommended UW should design opportunities for student reflection on learning from work. Some Faculties or plans also view the work-term report primarily as a way to help the students enhance writing skills rather than to reflect on work experience. In many Faculties, individual faculty no longer review work-term reports, so they cannot draw upon these when teaching. Increasingly, graduate students or sessionals (part-time instructors, normally hired to teach one or more specific courses or to do other course-related work) assess work-term reports. For at least one Faculty, the graduate students conducting the assessment of work-term reports are enrolled in another Faculty. As a result, UW has moved far away from the ideal that work-term reports are the basis for critical reflection of the work-term experience, and are an important tool to help faculty incorporate students’ work experiences into their courses. The obvious explanation for this drift away from the ideal is the large number of students in co-operative plans, and the work load generated by faculty having to read work-term reports. A second explanation is that the marking scheme from years ago did not include this aspect. A third explanation is that the communication skills of students are poor and need improvement, leading to their being addressed in the work-term reports.

A further problem for students is that a number of Faculties do not have written guidelines specifying expectations for work-term reports. Another issue for students is that evaluation of the work-term reports often is inconsistent within as well as between departments. CECS has developed a template to guide the marking process, but, as some have observed, the template assumes all students have jobs readily and directly related to their studies. When this does not occur, the template is viewed as less relevant. There is also a need in some Faculties for a work-term report, and this need cannot be ignored.

A general reaction of many students is that the work-term reports have little value, and are something to be endured. For most students, the work report has neither technical nor reflective value. It is too often seen as another essay-type assignment, and an educationally poor one at that. This view is confirmed by a survey completed by Katrina Strampel (2004), a Master's student in English at UW, for her major project paper. The survey was designed to assess the value students ascribe to the current co-op work-report process. It was found that, although students agree there is value in the process, in general they are dissatisfied with the extent to which the goals of the process are being met, especially in the fostering of knowledge integration.

UW thus has some fundamental choices. It could retain work-term reports, and address the problems causing frustration for the students (lack of explicit guidelines regarding what is required, inconsistency in marking) and the aspects needed to cause critical reflection by students. This could be appropriate for Faculties in which the reports are of a largely technical nature and the goals are clear (as in Engineering), and work reasonably well. Or, UW could consider an alternative to the traditional work-term report. Two options deserve attention: academic modules created during work terms, and ePortfolios or eJournals. The committee appreciates that if these were to be adopted UW would still have to determine how they would be marked, by whom, and how they would be integrated back into classroom learning.

As noted in Section 4.2.4, Engineering already has launched its PDEng modules, and the other five Faculties are expected to follow. Ideally, one feature of some of the modules should be critical reflection of experience during the work term, and relating it to one or more themes identified in the module. Given that UW has already initiated the concept of modules to be completed on-line during work terms, and a core aspect of the modules is critical reflection, these offer a major opportunity to have students systematically connect work experience with literature related to academic concepts.

In the context of co-op at UW, an eJournal is an electronic diary or journal kept by a student during a work term, structured by a framework provided by Faculties. The purpose is to have the students regularly reflect on what is observed and learned during the work term, and relate it to previous course material. The eJournal would be submitted as a report at least by the end of the work term, with the possibility of some "progress reports" during the work term.

An ePortfolio is an electronic record of work experience that documents, with multi-media hardware and software, skill and knowledge acquisition. It is both a technologically sophisticated *curriculum vitae* and a tool to extend and reinforce learning. It is relevant to co-operative education in a fundamental respect: co-op as a form of education rests on the principle of the integration in the mind of the student of classroom and workplace learning. Compared to the traditional work-term report, ePortfolios have the potential to foster more effectively the process of two-way knowledge transfer between academic and workplace learning. A strong case can be made for the substitution of ePortfolios for work reports in those plans for which the technical content of the report is subsidiary to its reflective and integrative purpose.

UW is experimenting with electronic portfolios, through the Office of the Associate Vice-President, Learning Resources and Innovation. However, to date, there has been no pilot project to test the applicability of ePortfolios to co-operative education. Consequently, the Committee concludes that they should not be adopted at this time. In that context, testing on a pilot basis could make an excellent project for WatCACE.

***Recommendation 18: Where it is judged appropriate to continue using work-term reports, Faculties or Departments should (1) provide written guidelines specifying expectations of the work-term reports, (2) ensure that critical reflection is included in the reports, and (3) ensure consistent evaluation of the***

*reports. If reflection is completed in another way, then work-term reports could be used for other purposes.*

*The overriding goal related to evaluating learning during work terms should be critical reflection by each student. In that context, critical reflection should include applying classroom learning on the job, assessing one's career choice, exploring career choices, learning expectations of employers, and developing interpersonal skills.*

***Recommendation 19: A medium-term goal for UW should be to determine if critical reflection related to work-term experience can be better achieved through using the academic credit modules for work terms, in place of conventional work-term reports, and to connect the work-term experiences back to campus in the following academic term.***

#### 4.2.6 Enterprise Co-op

Enterprise Co-op assists co-op students to launch their own venture on a work term. Students may plan to launch a venture on a full-time basis on a work term. The more successful applicants usually have been developing their business start-up team and their business idea on a part-time basis for some time before they apply.

Between 1999 and 2004, 200 students applied to Enterprise Co-op and 40 ventures were approved for start-up. Sixteen of the start-ups were provided with funding to match, up to a limit, their own funds invested in their venture.

Students prepare a basic business action plan and collaborate with an experienced entrepreneur. Support includes initial mentoring and pre-launch assessment; access to business planning resources; access to lawyers, accountants and other start-up expertise; work-term mentoring and evaluation. In some cases, approved undergraduate students may receive \$1,000 a month in matching award funding while they pursue their business full-time on a work term. This possible matching funding is available due to donations from The John Dobson Foundation and from the UW-Microsoft Alumni Group.

Enterprise Co-op is a partnership between Innovate Inc., created by UW to nurture entrepreneurship, and CECS. This partnership brings together the respective strengths of the two groups, which is positive. However, the involvement of the two partners blurs matters related to accountability of and management for Enterprise Co-op. In addition, it does not provide an academic foundation for this initiative, a key feature of co-operative education. Furthermore, given that academic credit is given for work terms, an arrangement is needed so that academic plans are explicitly involved in Enterprise Co-op, to ensure that the proposed enterprise initiatives meet the expectations of the Faculties, and that there is an acceptable method to assess the experience with reference to academic credit being awarded.

***Recommendation 20: Enterprise Co-op provides a valuable work-integrated experience for UW undergraduates, but for it to be sustainable there must be a financial commitment from UW to provide support for students approved to participate in it. Consequently, the Advisory Committee responsible for Enterprise Co-op and the Development Office should develop a strategy to create necessary funding on an ongoing basis.***

***Recommendation 21: Given that credit for a work term requires assessment by the employer (through the employer's report) and by the academic plan in which the student is registered, each Faculty representative on the new Co-op Education Council should be responsible to make arrangements for the evaluation for students in his/her Faculty seeking co-op work term credit based on activity in Enterprise Co-op.***

***Recommendation 22: The membership of the Advisory Committee for Enterprise Co-op and the Development Office providing oversight for Enterprise Co-op should be expanded to include up to two individuals with responsibility for co-operative education in their Faculties (see Recommendation #2).***

#### 4.2.7 Internationalization of Co-op

Until the fall term 2003, UW did not officially admit international visa students into co-op plans. Beginning in that term, 55 international visa students were officially admitted, and in the fall term 2004, 124 students were admitted. Prior to 2003, 7 were admitted in 2001 and 5 in 2002 in a trial phase.

In 2004-2005, international visa students comprised 6.5% of the undergraduates and 25% of graduate students. It has been recommended that UW should establish a target of 15% and 30% for international visa undergraduate and graduate students, respectively, indicating that in the future there will be more visa students at UW (Advisory Committee on International Connections, 2005: 25).

Opening co-op plans to international visa students is consistent with the strategy to internationalize UW. At the same time, international students pose some specific management challenges for UW, including the need to arrange work permits, difficulties encountered if a student does not get a work-term job since alternative opportunities for employment are constrained, and the need for additional support for some such students to ensure that employers continue to be highly satisfied with co-op students from UW. CECS and other co-op support units at Canadian universities have determined that, on average, each international visa student requires significantly more attention and assistance than a domestic student.

Most international visa students hope or expect to have at least some work-term experiences in Canada or North America. The attractiveness of UW to study at will be reduced if it becomes known or assumed that most international visa students in co-op plans return to their home country for work terms.

Given the above considerations, CECS must be consulted regarding decisions to increase the number of international visa students admitted into academic plans or Faculties. Too often it appears as if CECS is not consulted, or is consulted at the “last moment”, making it difficult for a systematic assessment of whether sufficient jobs will be available. The need for such consultation is addressed in Recommendation #8. However, other aspects also need attention.

***Recommendation 23: Given the experience of CECS that on average each international visa student requires significantly more support compared to a domestic student, CECS needs to determine the number and type of staff needed to provide such support. Such information should be used in establishing the budget for CECS. Without support, international visa student co-op work opportunities will be limited.***

***Recommendation 24: UW’s policy is not to allow international visa students to take work terms in “third countries” (a country other than Canada or the student’s home country). Consideration should be given to loosening this restriction, when it is determined that arrangement for visas and work permits are not onerous.***

Another dimension of internationalization is Canadian students working in other countries for co-op work terms. Such work terms can provide valuable experiences for students, and should be encouraged in an increasingly globalized world. From fall term 2004 to spring term 2005, UW had 788 students working in 48 countries during co-op work terms, and this number has been growing steadily



each year. However, there can be risks related to such work terms, particularly when students go to countries with instability or political unrest. In that context, both the students and UW must be well informed about conditions in countries to which students will travel to work or go on study exchange. More specifically, UW needs to have in place a systematic way to determine if students should travel overseas for a UW co-op work term in a particular country if there are concerns for safety.

***Recommendation 25: CECS, the International Programs Office (in the Research Office) and the Faculties collaborate to assess the risk of students working or going on study exchange in specific countries outside Canada, in addition to the generic risk information provided about international study or work experiences and the information provided by External Affairs related to travel advisories. Arrangements for risk assessment should be monitored by the Co-operative Education Council. The risks of working in other countries also should be addressed in the revised Co-op 101.***

#### 4.2.8 Graduate Studies

The federal government (2001:86), in its 'Innovation Strategy' paper, called for an increase in graduate enrolment in Canadian universities by an average of 5% per year through to 2010, and encouraged co-op graduate programs. When establishing the terms of reference for a review of graduate studies at UW in 2002, the Provost noted that the view by the federal government regarding co-op programs "clearly presents a unique opportunity for UW." Subsequently, in his assessment of graduate studies at UW, Sedra (2002) recommended that "The University of Waterloo is uniquely positioned to mount graduate co-op programs. The initiatives already underway, especially in the Faculty of Arts, should be supported and other Faculties should be encouraged to pursue this option." In the same report, however, Sedra (2002) reported that one view often presented to him was that "Co-op has been a barrier to the full development of graduate studies."

UW has decided to systematically increase the number of graduate students. Regarding the role of co-op, the findings by Rowe and Ricks (2004: 172-173) and ongoing work by Rowe indicate that co-op graduate plans at Waterloo and elsewhere in Canada have not proven to be very popular, and enrolment seems to be falling:

- currently, there are 17 graduate co-op plans at UW, most of them ad hoc,
- enrollments are modest (just over 50 students) and falling (10 plans have one or no students),
- largest programs at other institutions typically are in business, administration, or economics, plans that often are less research oriented, and,
- in a number of plans elsewhere, students are placed locally, thus eliminating problems associated with relocation for students who often are married.

Rowe has concluded that many students are attracted to UW for graduate work because of the opportunity to have co-op work opportunities. Experience at UW indicates that:

- students who obtain appropriate work experience are very supportive of graduate co-op, but most are very critical of the number and quality of their work experiences,
- the majority of students who came to UW because of co-op switch to regular plans or never register (because of the peculiarities of graduate co-op registration, students often do not register as co-op until they go on a work term), and,
- students report that the main reason for their change of status is due to the difficulty of obtaining high-quality work experiences, or because their supervisors are reluctant to have them leave the laboratory.

Rowe also concluded that successful graduate co-op plans require more resources in CECS and a commitment to graduate co-op by both academic departments and UW, as faculty are generally not interested in helping to find work opportunities. An administrator at another university reported to Rowe that it takes almost twice as much work to find a suitable work term for a graduate student compared to an undergraduate student. Another challenge is that, for many graduate students, it will most likely be the advisor who is in the best position to find an appropriate work experience, as CECS staff most often do not have the specialist expertise to determine the suitability of a job.

Co-operative graduate plans attract high-quality applicants, and are especially appealing to international students looking for North American work experience. If resources are available to support the plan, students will be retained and be supportive. If resources are not available, however, UW should not allocate time and energy to graduate co-op. Poorly run plans can do more damage to UW's reputation than not having a graduate co-op plan.

Wilson and Varty, leaders in co-op education in the USA, visited UW to meet with the Committee. Their advice regarding graduate co-op plans was that they are attractive for a university, but should not be 'institutionalized' in the sense that all academic graduate plans would offer a co-op option. Instead, their view is that a two-pronged strategy is best: (1) formal graduate co-op options for professions or disciplines for which co-op is a good fit, and there is confidence that high-quality jobs can be obtained, and (2) university-wide capacity to accommodate a student in any academic plan who wishes to have a co-op option, and has identified a supervisor prepared to participate actively in developing all components of the plan, including finding appropriate work-term opportunities.

Given the above, UW needs to systematically address the following: (1) does UW want to have graduate co-op plans? (2) if so, what are appropriate models for graduate co-op plans? (3) what should be the role of CECS in graduate co-op, especially related to identifying appropriate work opportunities? and (4) what co-op fee, if any, should graduate students pay?

***Recommendation 26: UW should encourage graduate co-op for plans when evidence indicates high-quality work experiences of sufficient number are available, and appropriate faculty are prepared to become engaged in all aspects of co-op education.***

***Recommendation 27: In parallel with Recommendation 26, UW should encourage the capacity to allow students in plans without formal co-op options to be able to develop such an option as long as a supportive advisor has been identified.***

***Recommendation 28: All existing graduate co-op plans should be assessed during their OCGS review, to determine if their enrollments indicate sustainable plans, and to determine if students are obtaining high-quality work experiences. When findings indicate such plans are not sustainable, they should be discontinued.***

***Recommendation 29: Where it is decided to have graduate co-op plans, and services of CECS are provided to support them, CECS should be involved in the creation of the plan, and graduate students should pay a co-op fee. The nature and size of the fee need to be determined.***

#### 4.2.9 Support from Housing regarding accommodation in other cities

One stressful aspect of co-op education is the regular and frequent movement of students between UW and various locations as students alternate study and work terms. It is common for students to collaborate regarding housing by arranging for two groups to alternate occupying an apartment or house

rented under a 12 month lease. However, this arrangement can often become complicated when a student in one of the groups chooses to work for a term in a city other than where the group has rented the apartment or house. This problem will become more challenging if 8-month work terms are offered more widely by UW academic plans.

UW could reduce the stress, and differentiate itself from other universities offering co-op plans, if a web site were to provide information about rental accommodation already used by co-op students in various communities. Indeed, the students already operate two such web sites (<http://www.room4me.ca/> and <http://www.uwsube.com/> [a site mostly for co-op students]), so there is a base from which to work to enhance provision of such information.

As a longer term goal, it would be appropriate for the Housing Office to examine whether UW might lease rental facilities in selected cities for which there is confidence that significant numbers of students work there each term, and thus the probability is very high that such housing leased by UW would be occupied. At some time in the future, it would be worth testing this idea in one community, such as Ottawa, to determine what practical issues would have to be managed.

***Recommendation 30: The Housing Office examine the feasibility of becoming more involved in providing information about rental accommodation in cities to which significant numbers of co-op students travel each term, to reduce the time and effort required by co-op students in arranging accommodation.***

#### *4.2.10 Waterloo Center for the Advancement of Cooperative Education (WatCACE)*

The Waterloo Center for the Advancement of Cooperative Education was established in 2002, and is designed to determine and share some of the best practices of work-integrated learning through the conduct, facilitation, and application of research.

WatCACE has the following objectives:

- provide a stimulus for research into all aspects of co-operative education and other forms of work-integrated learning,
- sponsor and advocate the use of research to inform policy development both within the University of Waterloo and more generally,
- collaborate with other institutions and organizations in the sharing of knowledge about work-integrated programs,
- provide a forum for exchange of information and perspectives about co-op education among relevant groups (students, faculty, staff, employers, government),
- study the co-operative work-term experience in order to provide advice on continuing academic improvement,
- solicit resources for support of research on co-op education and assist others in doing so, and,
- serve as a central repository for scholarly work on co-op education.

It is logical for UW, with the largest co-operative education program in the world, to facilitate research on the process of co-operative education. Given the recent establishment of WatCACE, and that it will fall under the formal review process used by the Office of Research every 5 years for research centers, WatCACE has not yet been systematically reviewed. The Committee believes that WatCACE

should be given opportunity to demonstrate the value it can add to the understanding of co-op, and have its normally scheduled review in 2007.

However, the Committee also believes that UW would benefit significantly if more research about co-operative education occurred at UW. One particular aspect that would be helpful would be examination of “performance indicators” to use in monitoring and evaluating the effectiveness of CECS. In that context, the Committee concludes that it would be desirable for WatCACE to be allocated funds to use as seed money to support research by faculty at UW on co-operative education.

***Recommendation 31: One ongoing activity of WatCACE should be to conduct research to help address challenges being encountered by the academic and non-academic support units involved in delivering co-op education at UW. The Director of WatCACE should consult with the academic units and CECS to determine priority issues and aspects of co-operative education to be studied, and annually should report to the Co-operative Education Council about priorities, initiatives and progress.***

***UW should allocate to WatCACE research funds to which UW faculty can apply to initiate research on co-operative education at Waterloo. One condition of the funding will be that each research project employs at least one undergraduate co-op student.***

#### 4.2.11 Waterloo Advisory Council (WAC)

The Waterloo Advisory Council (WAC) was created in order that UW, on an ongoing basis, could receive external guidance on curriculum design and content, needs of employers related to co-operative education, and other matters. Administrative and coordinating support for WAC has been provided through CECS.

WAC is based on Faculty-specific groups which meet several times a year to discuss issues and opportunities, as well as all WAC members meeting together to share insights related to University-wide Faculty matters.

WAC has the capacity to provide valuable insights for UW. However, it does not meet a key need for CECS and Faculties: a mechanism to allow ongoing and explicit dialogue regarding employers’ needs; trends related to demographics and the labour market; and, changing styles and patterns of recruitment. Other needs also exist, such as monitoring the adequacy of CECS services provided to employers. Thus, advice is needed at both strategic and operational levels. Several options are possible to meet this need: (1) a separate group is created, (2) a subcommittee of WAC becomes the mechanism, or (3) WAC becomes the mechanism. The fundamental need is for CECS to have regular and ongoing input from individuals with expertise in the private and public sector. It may be appropriate that some members would be drawn from WAC. Faculties also need advice related to discipline- or profession-specific matters, such as appropriateness of the curriculum and opportunities for new academic plans.

CECS provides administrative support to WAC, due to the historical relationship of WAC and CECS. However, given that WAC now provides advice to UW as a whole and to Faculties, it is not apparent why the administrative support for WAC continues to be based in CECS. UW should consider if such support from CECS continues to be the best use of that department’s resources.

***Recommendation 32: A new group should be created to provide advice to CECS and Faculties related to employers’ needs and changing patterns of recruitment and hiring related to work opportunities for co-op and regular students. Emphasis on membership should be for people having expertise related to labour trends and demographics, and hiring practices.***

The Committee is aware that the creation of the group recommended above raises questions about its relationship with WAC. The future role of WAC is beyond the Committee's mandate, but Committee members do believe that the Provost, in consultation with the Deans and CECS, needs to clarify the role for WAC. The Committee believes that WAC members offer the greatest value when working directly with individual Faculties, and thus concludes that a Faculty focus is likely to provide the most value added.

#### *4.2.12 Career Services: alumni, staff*

Career Services receives much of its funding from undergraduate student ancillary fees. As a result, it is appropriate that its services are oriented to current undergraduate students in all plans, as well as to alumni. It is recognized, however, that one of the staff positions is shared with the Alumni Affairs department of the Development Office. Furthermore, as the external assessment team observed, Career Services should give highest priority to meet the needs of UW students and alumni, before pursuing activities intended to bring it national and international recognition.

Staff at UW also often seek career advice and services. UW needs to clarify the role of Career Services for that aspect, relative to Human Resources or Counselling Services.

***Recommendation 33: Career Services should focus on lifelong service to students and alumni. Career services for staff should be provided from other departments, such as Human Resources.***

***Recommendation 34: The present practice of providing alumni a specified amount of support at no charge to be followed by a charge to cover costs of services should be continued.***

### **4.3 Management Issues**

#### **4.3.1 Co-op**

##### *4.3.1.1 JobMine: matching students to jobs*

JobMine, a computer-based system to facilitate the matching of students and employers, went live in spring 2004, after several years of development. JobMine provides a faster way for students and employers to match interests. However, it is essential that JobMine be as user (students and employers) friendly as possible. In that context, while many employers are pleased with JobMine, some have expressed concerns about it.

***Recommendation 35: The JobMine team, involving staff from IST and CECS, continue to improve the JobMine system, with particular attention to concerns identified by employers and students.***

***Recommendation 36: All Coordinators should receive on-going training on the JobMine system, in order that they can provide continuous advice about it to employers. Every employer be given the opportunity to have a Coordinator provide hands-on advice related to JobMine.***

### 4.3.2 Career Services

#### 4.3.2.1 Visibility and accessibility

The visibility or profile of Career Services on the campus is the major management issue for Career Services. The student and Faculty self-study reports contain a consistent message: many students are not aware of Career Services as it is in the shadow of Co-operative Education. While students who use Career Services are very positive about the services received, many others seem unaware of help available to them. The external assessment team noted during its site visit that very little was said about Career Services, other than it was invisible. The external assessment team recommended that Career Services should be moved physically and administratively out of CECS. It did not recommend Career Services be combined with Counselling Services on the belief such a change would create a new set of profile issues.

One explanation for the low profile of Career Services is its location in the Tatham Building, which offers benefits and disadvantages. Positively, many valuable benefits occur by Career Services and Co-operative Education being adjacent to each other in the same building. For example, Career Services provides services to students regarding preparing resumes and for interviews, valuable to co-op and regular students. Negatively, Career Services is difficult to see and therefore to find. Indeed, for many students, there is a strong belief or perception that only co-op students go to the Tatham Building, despite the large sign in the window on the north end of that building highlighting that Career Services is located there and offers services to all regular and co-op students.

Another explanation for the lack of profile is, in the eyes of some students, lack of clarity regarding the roles of and functions provided by Career Services and Counselling Services. On most campuses in Canada, it is normal for these units to be adjacent to each other, given the natural partnership because each supports students as they consider career choices. At the same time, no other campus has the type of co-op presence that UW has. And, the Review Committee has become aware that two other Ontario universities have recently moved their co-op and career services units together into the same administrative unit, after having had them operate as separate units.

The Committee concludes the key issues to be addressed are: (1) how to take Career Services out from under the shadow of Co-operative Education, and (2) how to clarify for students the relative roles of Career Services and Counselling. The Committee believes that separating the two units will not by itself resolve this problem. As a result, it is not convinced that splitting the two units (Career Services and Co-op) provides sufficient incremental value at this time to justify the energy and subsequent adjustments required. However, the Committee encourages the Executive Director of CECS to examine the benefits of different arrangements relative to the goal of giving higher profile to Career Services, especially if in the future opportunities arise for an alternative location for the Career Services office.

***Recommendation 37: Career Services and Co-operative Education be kept together in one Department.***

***Recommendation 38: Career Services review its activities to raise its profile on the campus, specifically targeting regular students.***

***Recommendation 39: Career Services and Counselling Services develop a strategy to clarify their complementary roles, and, do that by not later than December 2005. Once that task is completed, the distinctive roles should be communicated to the Student Services Advisory Committee and to the Co-operative Education Council.***

#### 4.3.2.2 Assistant Director's role

For Co-operative Education, three Associate Directors report to the Executive Director. Given the desire to enhance the profile of Career Services, the job description of the Assistant Director, the senior manager in Career Services, should be reviewed and reassessed by the Executive Director.

***Recommendation 40: By December 2005, the role and job description of the Assistant Director of Career Services should be reviewed and assessed.***

### 4.4 Administrative Issues

#### 4.4.1 Co-op

##### 4.4.1.1 Administrative organization

Several key issues need attention by CECS. It needs to: (1) become more systematic and dynamic in building, maintaining and extending relationships with employers, (2) become more engaged with Faculties and academic department/schools in achieving the ideals of integrating work and classroom learning, (3) develop metrics to measure the effectiveness of CECS, and (4) create an effective partnership for coordinating its off-campus work with other academic support units (Development, Research) which also build and manage relationships with off-campus partners.

The Committee believes that the current administrative or structural arrangements within CECS should be examined with regard to the above functions and tasks, to determine whether the current arrangements are the most appropriate. Such examination should be completed by the Executive Director to ensure that the organizational structure is well suited to allow CECS to build, maintain and extend relationships with employers to ensure sufficient, high-quality jobs for co-op students, to strengthen the partnerships between CECS and the Faculties, and to make CECS activities transparent to students, especially related to the allocation of funding received from co-op fees.

***Recommendation 41: The Executive Director of CECS assess the overall organizational structure of CECS to determine whether organizational changes should be made to allow CECS to be more effective in dealing with the changing environment.***

##### 4.4.1.2 Coordinators

Mostly working away from UW, Coordinators' jobs include maintaining and enhancing relationships with existing employers of co-op students, finding new employers for co-op students, and providing support for students while they are on work terms. Coordinators have been an important component of the support for co-operative education, given that over 85% of the jobs taken by UW co-op students are located outside of Waterloo region.

Their job is challenging, as students often perceive the Coordinators to favour the interests and needs of employers, while employers view them as placing the needs of students first. Thus, Coordinators have to juggle responsibilities regarding two major client groups (students, employers) whose needs can be quite different, in addition to responding to the needs of the Faculties and CECS.

A major challenge for co-op at UW is to have jobs in sufficient numbers and quality for students, and especially for students on their first work term. Given the changing job market, and the growth of co-op programs at other universities, questions need to be raised. What mix of methods should be used by CECS relative to the need to develop relationships with employers, maintain existing jobs and find new ones, and provide support for students? What particular niche should Coordinators have in providing these services? Is it reasonable for individual Coordinators to do all these tasks, or might different kinds of Coordinators specialize in selected aspects? On what basis should decisions be based regarding the number, type and distribution of Coordinators? What relationships should Coordinators have with Faculties? With what frequency should Coordinators visit students who are on work terms? What systems should be in place to monitor and measure the effectiveness of Coordinators? All of these questions suggest that the role of Coordinators needs to be assessed by the Executive Director of CECS, to ensure that needs in the future will be met. While the Committee is not in a position to prescribe what choices should be pursued, it does believe strongly that the current arrangements related to Coordinators should be assessed, and it should not be assumed that what has served UW well in the past is the right model for the future.

***Recommendation 42: The roles of Coordinators should be assessed by the Executive Director regarding their role relative to various options to maintain existing and to create new jobs, and to provide support for co-op students while on work terms. Particular attention should be given to establishing metrics to monitor effectiveness in dealing with those tasks. More generally, the Executive Director should establish a system for tracking and monitoring job development.***

#### 4.4.1.4 Marketing arrangements

CECS has one marketing staff member, who works collaboratively with other marketing specialists at UW. Given the limited resources, CECS's marketing initiatives have appropriately focused on employers. The Undergraduate Marketing and Recruitment team in the Registrars Office publicizes co-op to prospective students in high schools.

There also is a need for marketing when new co-op plans are developed and implemented. In such cases, CECS needs to be able to work closely with relevant Faculties and Departments or Schools in marketing initiatives. When a proposal is presented to Senate Undergraduate Council regarding a new co-op plan, the business plan should explain how the host academic Department and CECS will provide marketing support.

There also is a need to ensure that prospective and new co-op students have realistic expectations related to job opportunities (e.g., UW cannot guarantee every student will have a job every work term). Furthermore, students need to understand that they have the responsibility to make themselves as competitive as possible for work-term positions.

Given the growing competition from co-op programs in other universities and colleges in Ontario and across the country, CECS needs to work with other marketing individuals or teams in UW to design an integrated strategy to market co-operative education to employers, prospective students, government and other key stakeholders. The Committee believes it likely, once an integrated marketing strategy is in place, that extra funding will be needed to implement the required quality of marketing.



***Recommendation 43: CECS and other recruitment groups at UW should develop an integrated marketing plan for co-operative education, and for specific co-op plans. The involvement of Faculties and academic units must be made explicit in this overall marketing plan.***

***Marketing material prepared for prospective students should ensure that students and their parents have realistic expectations about the co-op experience at UW. One aspect to create realistic expectations is to provide one or more metrics about employment experience of co-op students.***

#### 4.4.1.5 Funding

##### 4.4.1.5.1 BIUs not reflecting extra costs

UW has documented the incremental costs associated with co-operative education (Downey, Kalbfleisch and Truman, 2002). These costs are of three kinds: for teaching courses three semesters annually, administrative support (CECS), and additional maintenance costs from using teaching space throughout the year. Regarding extra teaching needed, Downey et al (2002: 6) concluded this totaled about 10.7%. On that basis and “Since co-op students account for 57.8% of Waterloo undergraduate BIUs, this would translate into an increase of 18.4% in BIUs for co-op programs.” They further believed that the 18.4% figure should be regarded as minimal because it benefitted from the efficiencies of Waterloo’s large-scale co-op operation. As a result, they recommended that the Ontario government should recognize such extra teaching costs, and in so doing, provide an incentive for growth by increasing co-op BIUs by 20% for all Ontario universities.

In contrast, they concluded that it was reasonable for the students’ co-op fees to cover the costs incurred by CECS for helping students to find work-term jobs, while the extra costs of operating the physical plant of the campus for 12 months at “full tilt” are “reasonably borne by the university itself.”

The provincial government consistently has recognized the value of the co-operative education model, but to date has not allocated additional funds to the value of BIUs to reflect the incremental cost.

***Recommendation 44: The President and the Vice-President, External Relations, should continue to explain to the government of Ontario the incremental costs incurred through the co-operative education model, with a view to have the value of BIU grants reflect that extra cost.***

##### 4.4.1.5.2 Tax credits for employers

Effective September 1, 1996, Ontario created a “Co-operative Education Tax Credit”, providing a refundable tax credit to Ontario corporations equal to 10% of eligible expenditures incurred in providing qualifying co-op work placements. The tax credit is capped at \$1,000 per student for each co-op work placement.

The Business Council and the Canadian Association for Co-operative Education are on record that the provincial government should increase the value of the tax credit, given that 9 years have passed since the level of support was set. Given inflation since the time the tax credit was introduced, UW should continue to work with these organizations and other universities with significant co-op programs to lobby the provincial government to increase the value of the tax credit.

***Recommendation 45: UW continue its efforts to persuade the provincial government to increase the tax credit for employers of co-op students to at least reflect the cost of inflation since 1996, and also to emphasize that a higher tax credit be given to employers providing jobs for first-time work experiences.***

#### 4.4.1.5.3 Student co-op fee

The student co-op fee is one of the major issues for students at the University of Waterloo. Several aspects are involved. First, UW and CECS have always been explicit that it is a program rather than a job-finding fee. In that regard, because the provincial government does not provide any grant funding to cover the incremental costs of co-operative education, UW has worked on the principle that students in co-op academic plans must be charged a fee so that some of the cost of operating co-operative education at UW can be covered.

The provincial government provided guidelines indicating which costs may be recovered for the work-placement activities associated with co-op. UW has been applying those guidelines since 1987/88. As a result, calculations are conducted regarding the cost of CECS operations (excluding Career Services) and, based on the number of students paying the fee, the student co-op fee is set to recover those costs.

Career Services expenses are not considered in the co-op fee because the Career Services expenses are covered by the Student Services Ancillary Fee. References to CECS in this section should therefore be taken to mean the Co-op Education part of CECS.

Because estimates are never precisely accurate, each year there is a risk that the revenues collected may be more or less than the eligible expenses. Any difference between the estimates and the actual amounts are included in the calculations for the fee in the subsequent year. For example, if the revenues exceeded expenses by \$100,000, in a given year, the fee should be set in the subsequent year to collect \$100,000 less than the expected expenses for the year. This carry-forward provision has not been automatically applied, but has been the subject of executive decision making. At the end of 2003/04, after 17 years of using this system, cumulative expenses exceeded cumulative revenues by \$2.3 million, or an average of \$135,000 per year. In 2003/04, eligible expenses were almost \$8.0 million.

Against this background, the Committee considered the principles underlying the co-op fee, including fee assessment and alternative methods for setting the co-op fee.

#### ***Service for Fee***

The Committee unanimously agreed that the co-op fee is a program fee, not a job-finding fee. This principle provides the basis for responding to questions raised by students over the years such as:

*I did not get a job this term, why can't I have my co-op fee refunded?  
I found my own job. Why can't I have my co-op fee refunded?*

Since the fee is a payment which ensures the availability of the overall service and specifically is not a job-placement fee, individual outcomes do not affect the payment of the fee. CECS is very concerned that some students are not placed each term. Together with the UW senior administration, CECS must do whatever it can to maximize the placement rates each term. On occasion UW's President has requested the campus community to create openings for co-op students where possible, and has even frozen replacement of academic support positions for a term in favour of co-op placements.

The current fee is designed to cover the costs of providing the overall co-op service, amortized over the normal academic career of an undergraduate. Thus, a typical co-op student who registers for 8

academic terms and whose program provides for 6 work terms pays the co-op fee along with tuition fees in 8 academic terms.

In recent years, in recognition of the difficulty in placing students after one or two academic terms, many of UW's co-op plans were modified to have the first work term start after the 2A term. Theoretically, reducing the number of placements required, especially early in the academic career, would reduce the workload and thus the costs in CECS. If costs are reduced, then revenue to be collected should decline. To accommodate the fewer work terms for these plans and the theoretical reduction in costs, the assessment of the co-op fee begins in the 2A term, not the 1A term. Thus, these students pay for the availability of the co-op service over 6 terms. In the context of expanding co-op enrolment, competition from other co-op universities and the general state of the economy, particularly the technology slump, CECS has had to work even harder to avoid losing ground and the expected cost reductions have not been realized.

Having identified that the co-op fee funds a general service, available to all co-op students, the committee heard a number of questions about what service is provided:

*What is the role of the Coordinator?*

*How often does a Coordinator visit the student on a work term?*

*What service can a student with a job out-of-country expect?*

*What is the "right" cost structure for CECS?*

*Are performance measures available for CECS activities? Are they appropriate?*

*How does CECS allocate budget to various units within the department?*

*Are there different needs/costs for different plans?*

*How does CECS identify and address differing needs?*

These questions relate to issues of "transparency" and accountability. Members of the Committee appreciate that UW administration and CECS management readily provide the information and answers to such questions as they arise. However, there always is scope to improve the sharing of information and understanding with the parents of students and potential students.

### ***Fee for Service***

The assessment of the co-op fee can be viewed in two ways: as a *user-pay fee* or as an *all-pay fee*. User-pay fees are calibrated according to the amount of service provided. All-pay fees are set to provide a specified amount of service.

User-pay fees are often thought of as the "best way" to go for aligning the costs for servicing a particular group with the fee for that group. Unfortunately, user-pay fees sometimes run counter to some basic principles or other objectives. For example, a student who does not get a job might argue no job – no fee. The true underlying cost may be significantly higher than for a student who got a job. The cost of placing first work-term students is higher than for sixth work-term students, implying that the fee should start high and decline. However, the student's ability to pay is often dependent on work-term earnings which start low and end high, exactly the opposite of the cost structure.

All-pay fees "absorb" differences in the underlying, true costs of service provision. Each student pays the same average fee, regardless of demands on the system. This principle allows for smoothing of the costs incurred on behalf of the student. While CECS may do more work in finding placements for early work terms, resulting in a higher than "average" cost, later placements may be at less than "average" cost. All-pay fees may be divided into a few groups in recognition of distinct needs. For example, there might be different all-pay fees for full-time versus part-time or graduate versus undergraduate.

## *Annual Review Process*

As with many of the student services funded by the Student Services Fee, the Co-op Education part of CECS is 100% funded from student fees. When the University and the students signed the Ancillary Fee Protocol, establishing the Student Services Fee, the co-op fee was deliberately excluded from the protocol because co-operative education is a part of the academic enterprise at UW. The student services included in the protocol are ancillary in nature.

The Ancillary Fee Protocol created the Student Services Advisory Committee with members from UW administration, the departments involved and the students – with student members in the majority. While each student service unit is managed by a Director, the Student Services Advisory Committee is responsible for reviewing all aspects of these services and to advise the Vice-President, Academic and Provost, on proposals for increases, decreases or redistribution of services and funds in connection with these services; on the adequacy of these services; and, on the amount of the Student Services Fee.

Each Fall, the Committee assesses the services provided by the units to ensure that they continue to meet the needs of students. In 2003, the Committee increased the budgets of several units in order to expand services to meet the double cohort demand, changing demographics/younger students, expected steady state increase in the number of students served, and unmet need.

Although the co-op fee covers academic-related expenses and the student services fee covers ancillary expenses, there is a common need for review and comment by the students. UW already has the Provost's Advisory Committee on Student Fees (PACSF) which includes in its mandate the review of proposed changes to the co-op fee. By using PACSF as a forum to monitor fee rates and CECS activities, it should be possible to achieve a greater degree of transparency and accountability.

## *Alternative Fee Structures*

The Committee recognizes that it is often difficult to find the right balance between simplicity and equity in fee structures. Generally, simplicity is better than complexity. But complexity allows for many of the “wrinkles” to be accommodated.

The UW co-op fee is the ultimate in simplicity. The same fee is assessed to all who pay the fee that term. Although in some plans the assessment is delayed until 2A, the single fee approach means that some students pay 6 times for 4 placements and some pay 6 times for 5 placements.

Since equity is a desirable objective, a possible alternative is to have different fees related to the number of placements expected for the plan. The Committee notes that there are currently some graduate co-op plans which, although work terms are arranged through CECS, the students do not pay a co-op fee. To maintain equity, these student should be assessed a fee.

Predictability is another desirable objective, both for students as it relates to the fee during their career at UW and for CECS to know what budget is available to service student needs. As a possibility, the Committee considered alternatives for the fee-setting mechanism.

- (1) Establish a starting base budget for CECS which requires a co-op fee of \$X to support, or,
- (2) Each year, after taking into account the number of students paying the fee, increase the fee by CPI (Consumer Price Index) plus an amount for salary increases plus an amount required to increase/improve services as presented to the PACSF.

The co-op fee is now based on two predictions, and is hampered by the significant lead time required for fee approval. UW seeks to take fee rate proposals to the Board of Governors for approval in February for the fiscal year starting the following May. Consultation with students should occur by the end of the calendar year, limiting the accuracy of current year expense estimates.

When the fee is reviewed, CECS expense data are available for (1) the previous fiscal year, (2) the current year's estimated expenses, and (3) the estimated expenses for the upcoming year *for which the fee is being set*. Similar data are available for the number of co-op students who pay the co-op fee. Currently, the fee is set using the estimated amounts for the next fiscal year. Although this is, in some sense, the "right" process because it matches the expenses with the student receiving the service, two estimates, made 18 months in advance of reality, result in error that we would like to avoid.

One way to minimize the error inherent in projections is to use actual data. For example, as with the Student Services Fee, the expenses to be recovered could be based on the previous fiscal year's expenses, as reported in the audited financial statements. Although this introduces a lag into the expense-revenue balancing objective, it does provide increased predictability.

***Recommendation 46: CECS produce an annual statement of service, published on its web site, providing sufficient details on the CECS operation so that co-op students can have a better understanding of services covered by the co-op fee. The report should include the general principles underlying the CECS service. Steps will need to be taken to remind all co-op students that the statement is available. Publicity material to potential students will also need to provide information about CECS and the co-op fee.***

***The co-op fee continue to be assessed as an "all-pay" fee. This principle will need to be included in the annual report produced by CECS.***

***The Executive Director of CECS make a presentation to the Provost's Advisory Committee on Student Fees (PACSF) in the fall term each year regarding the activities and expenses of CECS in the prior year and the plans for the upcoming fiscal year. The impact of any changes on the co-op fee will be part of the presentation.***

***UW, in consultation with students, revise the co-op fee-setting mechanism (including graduate plans where appropriate) to establish a starting base budget for CECS (excluding Career Services) with a corresponding co-op fee. Future increases should be based on CPI (Consumer Price Index) plus an amount for salary increases plus an amount required to increase/improve services as presented to the PACSF. Increases above the CPI and/or salary increases should be reviewed by the Co-op Education Council prior to being sent to the PACSF.***

#### 4.4.2 Career Services

##### 4.4.2.1 Financial arrangements

Career Services is funded primarily through the Student Services Ancillary Fee, set under the oversight of the Student Services Advisory Committee. A complication is that Career Services shares one staff position with the Alumni Department, and also that some of its costs are shared with Co-operative Education. In addition, due to the partnership relationship between Co-operative Education and Career Services, some staff time from Career Services is allocated to support co-op activities, and vice versa.

For budgeting purposes, starting in 2004, Career Services became a separate unit. Before then, it was an element within the overall budget of Co-operative Education and Career Services. Work is ongoing with Financial Services to complete the separation of the two units for financial purposes.

As long as Career Services is supported by the Student Services Ancillary Fee, it will be under the oversight of the Student Services Advisory Committee. In order to meet the review process of that Committee, Career Services needs to develop systems to: (1) systematically survey students, regular and co-op, to ensure its services are meeting the needs of students, (2) document the use of the services it provides, and (3) document the partnership arrangements with Counselling to meet the needs of students.

***Recommendation 47: Once Career Services has completed, with Counselling, an overall strategy to meet career service needs of students (see Recommendation #39), it should estimate the base budget needed to support current services and to expand the services to reflect best practices related to career services for existing undergraduate students and alumni.***

#### **4.5 Next Steps**

This report is being submitted to the Vice President Academic and Provost, for his consideration and action, as appropriate.

The Review Committee believes that the report should then be considered at Deans' / Executive Council, especially for University-wide matters, with a view to receiving endorsement, and in parallel at Faculty Councils in order that Faculties and individual Departments and Schools can determine what action they will take. A decision also is needed regarding how this report can become input into the Sixth Decade Planning process.

In parallel, the Provost should give a copy to the Executive Director of CECS, and, on receiving the report, the Executive Director should begin working with her colleagues to determine changes needed within CECS.

At the same time that the Provost provides copies to Deans' Council members and the Executive Director of CECS, the report should be distributed to the Associate Deans of the six Faculties, the Executive Heads of the Federated Universities and Affiliated Colleges, and the Presidents of the Federation of Students and the Graduate Student Association.

The Committee further recommends that key stakeholder groups, such as the Waterloo Alumni Council and the Waterloo Advisory Council, should be provided with copies. As professional courtesy, the Committee also recommends that members of the External Review Team be sent copies of the report.

It would be desirable to have verbal reports based on this review given to Senate and the Board, in order to share the findings, insights and major recommendations, and to receive input.

This report should be a "living document", with provision for oversight by the Co-operative Education Council regarding progress made on the recommendations, and for updating on a regular basis.

***Recommendation 48: As with academic departments, a review of co-op and career services should be scheduled every seven years. The subsequent review should update this report, and is unlikely to require such an in-depth review.***

#### **4.6 Recommendations: Lead Responsibility, Resource Implications and Timing**

In this Section, all 48 recommendations are presented in numerical order, along with the Committee's views about who should have lead responsibility, what are the resource implications, and by when action should be started or completed. These recommendations are not listed in order of importance, but rather in the order in which they appear in the text of the main report. However, the 17 priority recommendations which appear in the Executive Summary are bolded below.

- 1: CECS should develop a clear mission statement to define its roles and functions, define clearly its relationships with partners, and determine criteria and indicators to monitor its success in achieving them.**

Lead Responsibility: *Executive Director, CECS*

Resource Implications: *Medium*

Action by: *February 2006*

- 2: Each Faculty identify a faculty or staff member who has lead responsibility for co-op education, and give that person a highly visible role and position. Where the work load will be significant because of a large number of students in co-op, this position should be at the level of Associate Dean. If appropriate, responsibility for co-operative education could be combined with other responsibilities.**

Lead Responsibility: *Faculties*

Resource Implications: *Medium*

Action by: *December 2005*

- 3: A Co-operative Education Council be established, with membership from each of the Faculties, CECS, students (the latter to be determined by the FEDs President or Vice-President Education), and one non-UW co-op employer, and be accountable to the Associate Provost, Academic and Student Affairs.**

Lead Responsibility: *UW (Deans' Council)*

Resource Implications: *Medium*

Action by: *First meeting by January 2006*

- 4: When new faculty are hired, the significance of co-operative education at UW should be mentioned in the appointment letter. UW, Faculties, Colleges and Departments/Schools should establish a coordinated approach to providing information to new faculty to help them understand the nature of co-operative education and career services, and their role to support students in co-op plans, and advise students about Career Services. Specifically, during the new faculty orientation activities at the beginning of each academic year, a workshop should be provided in which the basic principles of co-operative education are reviewed, the importance of evaluating the work-term experience is highlighted, opportunities for incorporating work-term experience into subsequent courses are assessed, and alternative methods of review are explained.**

Lead Responsibility: *Faculty Deans*

Resource Implications: *Medium*

Action by: *Deans report to Deans' Council by January 2006*

- 5: *UW should include a hallmark event focused on co-op education during the 50<sup>th</sup> anniversary celebrations in 2007. The Executive Director, in consultation with the Faculties, should recommend the most appropriate event.*

Lead Responsibility: *CECS Executive Director, in consultation with Faculties*

Resource Implications: *To be determined*

Action by: *Recommendation provided by January 2006*

- 6: ***UW should continue to emphasize co-op education over other forms of experiential learning, and should commit to have co-operative education continue to distinguish as well as define UW.***

Lead Responsibility: *Departments and Schools to determine the balance among co-operative and other types of integrated work learning. Senate Long-Range Planning Committee to address UW strategic implications during preparation of Sixth Decade Plan. Senate to confirm co-operative education as one of the defining features of UW.*

Resource Implications: *Low*

Action by: *Senate by December 2005. Departments and Schools by April 2006.*

- 7: *Other forms of experiential learning (internships, service learning) be encouraged and managed at the Department or School level, where appropriate, and be features of specific academic plans.*

Lead Responsibility: *Faculties*

Resource Implications: *Low*

Action by: *Immediate and ongoing*

- 8: ***UW only continue or expand existing plans, or add new co-op plans, when it can be established by CECS, in consultation with Faculties, that there is work experience of sufficient quantity and quality, or alternative experiential learning opportunities, to ensure high-quality work-integrated learning. CECS also should be consulted when academic units are determining how many international visa students will be included in co-op plans. This requires that CECS be involved, early in the process, in any proposals by a Department, School or Faculty for a new or expanded co-op plan, and that such proposals be approved by the Co-operative Education Council before they are submitted to Senate Undergraduate Council. CECS, in consultation with the Faculties, monitor all existing co-op plans to verify that they are sustainable in terms of providing high-quality work experiences from the first to the final work term. The findings from monitoring quantitative patterns should be reported annually to the Co-operative Education Council, while aggregate quantitative results, provided by CECS, combined with qualitative analysis, should be included in the academic program review self-study reports completed on a 7-year cycle. Where plans are not sustainable regarding quantity or quality of work experience, adjustments should be made related to enrolment, number of work terms, or other relevant aspects, or resources provided to CECS from appropriate academic units or other sources.***

Lead Responsibility: *Faculties and CECS*

Resource Implications: *Medium*

Action by: *Ongoing, with progress report by June 2006, and a plan for feedback following the setting of targets*



**9:** *In assessing success in providing sufficient work-term opportunities, the Executive Director should develop indicators. It is suggested that attention be given at least to (1) employment, at end of classes for the previous term, regarding the next work term, (2) employment at the start of the work term, (3) employment in the eighth week of the work term, and (4) quality of the work experience. The goal should be to achieve continuous improvement with reference to all four categories.*

Lead Responsibility: *Executive Director, CECS*

Resource Implications: *Medium*

Action by: *February 2006*

**10:** *Regarding job creation, UW and Faculties should designate a specified proportion of UW-funded work-term jobs for students beginning their first work term. The proportion may be variable across Faculties, recognizing that needs will vary. In parallel, CECS should endeavour to persuade employers to create and/or designate more first-time co-op jobs.*

Lead Responsibility: *Faculties*

Resource Implications: *To be determined by each Faculty and UW*

Action by: *Proportions determined by winter term, 2006*

**11:** *Regarding the job management process, UW should advise students in writing about the degree of personal accountability. If, in the opinion of CECS, a student has not shown him or herself to be fully committed to the job placement process, further support in finding work will not be offered. In particular, students should not have unrealistic expectations related to job types, location of jobs, or remuneration, although special personal circumstances should be recognized. Furthermore, the UW calendar should reflect the degree of personal accountability required of co-op students, and the expectation of their full engagement in the search process. Before participating in the CECS job match process, all co-op students have a responsibility to be prepared related to job search techniques, resume writing, interview skills, etc. Engineering students should receive this preparation through GENE 10, whereas students in other Faculties should receive it through a revised, compulsory Co-op 101.*

Lead Responsibility: *CECS and Co-op Education Council*

Resource Implications: *Medium*

Action by: *April 2006*

**12:** *All Faculties and CECS have a responsibility to work with each other to generate a sufficient number of jobs of suitable quality for their students, and to help students be well prepared when applying for jobs. Each Faculty, working with CECS, should prepare a strategy as to how these quantitative and qualitative needs will be satisfied, and report on a bi-annual basis to the Co-operative Education Council regarding action and progress.*

Lead Responsibility: *Faculties and CECS*

Resource Implications: *Medium*

Action by: *Strategies completed by April 2006*

**13:** *All academic plans offering co-op should seek to offer flexibility regarding length of work term, and UW should move toward providing both 4- and 8-month work terms, when appropriate. In this redesign, one of the basic principles of co-op education (systematic alternation of academic study and work experience) must guide any adjustments regarding length, mix and sequence of study and work terms.*

Lead Responsibility: *Faculties*

Resource Implications: *To be determined*

Action by: *Recommendations from Faculties to Senate Undergraduate Council by September 2006*

**14:** *One “work term” could be eligible for substitution by a volunteer experience, as long as CECS and the relevant Faculty have verified that there is opportunity for appropriate experiential learning. Such experience should be considered with particular regard to not-for-profit organizations, and in exceptional situations for for-profit organizations, if there is assurance that the student volunteer is not replacing an existing paid position, and will not be doing a normally paid job.*

Lead Responsibility: *Faculties and UW (Senate)*

Resource Implications: *Low*

Action by: *May 2006*

**15:** *UW should develop a proposal to submit to the Canadian Association for Co-operative Education to modify the accreditation criterion related to work terms always resulting in remuneration to the students, in order that volunteer activity can be counted toward meeting the work term requirements for a co-op degree.*

Lead Responsibility: *CECS, in collaboration with Faculties*

Resource Implications: *Low*

Action by: *Submission ready to submit by June 2006*

**16:** *By December 2005, the five Faculties that have not yet determined what extra activities will be introduced regarding academic credit for co-op work terms have detailed proposals submitted to Senate Undergraduate Council.*

Lead Responsibility: *Five Faculties, except for Engineering, in collaboration with Director of WatCACE*

Resource Implications: *To be determined*

Action by: *Proposals completed and submitted to Senate Undergraduate Council (SUC) by December 2005, for discussion at a SUC meeting in winter term 2006.*

**17:** *The coordination of providing the on-line courses for academic credit for co-op work terms in the five Faculties will be under the oversight of the Associate Provost, Academic and Student Affairs.*

Lead Responsibility: *Provost*

Resource Implications: *Low*

Action by: *Decision needed in fall 2005*

**18:** *Where it is judged appropriate to continue using work-term reports, Faculties or Departments should (1) provide written guidelines specifying expectations of the work term reports, (2) ensure that critical reflection is included in the reports, and (3) ensure consistent evaluation of the reports. If reflection is completed in another way, then work-term reports could be used for other purposes.*

*The overriding goal related to evaluating learning during work terms should be critical reflection by each student. In that context, critical reflection should include applying classroom learning on the job, assessing one's career choice, exploring career choices, learning expectations of employers, and developing interpersonal skills.*

Lead Responsibility: *Faculties*

Resource Implications: *To be determined*

Action by: *April 2006*

**19:** *A medium-term goal for UW should be to incorporate critical reflection related to work-term experience by using the academic credit modules for work terms in place of conventional work-term reports, and to connect the work-term experiences back to campus in the following academic term.*

Lead Responsibility: *Faculties*

Resource Implications: *To be determined*

Action by: *Each Faculty develop an approach by fall 2006*

**20:** *Enterprise Co-op provides a valuable work-integrated experience for UW undergraduates, but for it to be sustainable there must be a financial commitment from UW to provide support for students approved to participate in it. Consequently, the Advisory Committee responsible for Enterprise Co-op and the Development Office should develop a strategy to create necessary funding on an ongoing basis.*

Lead Responsibility: *Advisory Committee for Enterprise Co-op and Development Office*

Resource Implications: *To be determined*

Action by: *Report submitted to Senate Undergraduate Council by March 2006*

**21:** *Given that credit for a work term requires assessment by the employer (through the employer's report) and by the academic plan in which the student is registered, each Faculty representative on the new Co-op Education Council should be responsible to make arrangements for the evaluation for students in his/her Faculty seeking co-op work term credit based on activity in Enterprise Co-op*

Lead Responsibility: *Co-op Education Council*

Resource Implications: *Low*

Action by: *Approach developed by May 2006*

**22:** *The membership of the Advisory Committee for Enterprise Co-op and the Development Office providing oversight for Enterprise Co-op should be expanded to include up to two individuals with responsibility for co-operative education in their Faculties (see Recommendation #2).*

Lead Responsibility: *Advisory Committee for Enterprise Co-op and Development Office*

Resource Implications: *Low*

Action by: *Individuals identified by January 2006*

**23:** *Given the experience of CECS that on average each international visa student requires significantly more support compared to a domestic student, CECS needs to determine the number and type of staff needed to provide such support. Such information should be used in establishing the budget for CECS. Without support, international visa student co-op work opportunities will be limited.*

Lead Responsibility: *CECS*

Resource Implications: *To be determined*

Action by: *Completed in time for estimating budget for 2006-2007*

**24:** *UW's policy is not to allow international visa students to take work terms in "third countries" (a country other than Canada or the student's home country). Consideration should be given to loosening this restriction, when it is determined that arrangement for visas and work permits are not onerous.*

Lead Responsibility: *Co-op Education Council*

Resource Implications: *Low*

Action by: *Decision by winter term 2006*

**25:** *CECS, the International Programs Office (in the Research Office) and the Faculties collaborate to assess the risk of students working or going on study exchange in specific countries outside Canada, in addition to the generic risk information provided about international study or work experiences and the information provided by External Affairs related to travel advisories. Arrangements for risk assessment should be monitored by the Co-operative Education Council. The risks of working in other countries also should be addressed in the revised Co-op 101.*

Lead Responsibility: *CECS, in collaboration with the International Office*

Resource Implications: *Low*

Action by: *March 2006*

**26:** *UW should encourage graduate co-op for plans when evidence indicates high-quality work experiences of sufficient number are available, and appropriate faculty are prepared to become engaged in all aspects of co-op education.*

Lead Responsibility: *Faculties*

Resource Implications: *Low*

Action by: *Academic units decide whether to have/continue graduate co-op plans before their next OCGS review*

**27:** *In parallel with Recommendation 26, UW should encourage the capacity to allow students in plans without formal co-op options to be able to develop such an option as long as a supportive advisor has been identified.*

Lead Responsibility: *Graduate Studies Office, and Faculties*

Resource Implications: *Low*

Action by: *Graduate Studies Office to provide a framework or guidelines by April 2006. Academic units decide whether to provide this option before their next OCGS review.*

**28:** *All existing graduate co-op plans should be assessed during their OCGS review, to determine if their enrollments indicate sustainable plans, and to determine if students are obtaining high-quality work experiences. When findings indicate such plans are not sustainable, they should be discontinued.*

Lead Responsibility: *Graduate Studies Office to prepare guidelines by April 2006 for Departments and Schools regarding what constitutes “sustainable plans.” Departments and Schools to use these guidelines in their next assessment.*

Resource Implications: *Low*

Action by: *Academic units decide whether to provide this option before their next OCGS review, and to indicate how “sustainability” is determined.*

**29:** *Where it is decided to have graduate co-op plans, and services of CECS are provided to support them, CECS should be involved in the creation of the plan, and graduate students should pay a co-op fee. The nature and size of the fee need to be determined.*

Lead Responsibility: *CECS in collaboration with relevant academic plans*

Resource Implications: *To be determined*

Action by: *August 2006*

**30:** *The Housing Office examine the feasibility of becoming more involved in providing information about rental accommodation in cities to which significant numbers of co-op students travel each term, to reduce the time and effort required by co-op students in arranging accommodation.*

Lead Responsibility: *Housing Office*

Resource Implications: *To be determined*

Action by: *April 2006*

**31:** *One ongoing activity of WatCACE should be to conduct research to help address challenges being encountered by the academic and non-academic support units involved in delivering co-op education at UW. The Director of WatCACE should consult with the academic units and CECS to determine priority issues and aspects of co-operative education to be studied, and annually should report to the Co-operative Education Council about priorities, initiatives and progress. UW should allocate to WatCACE research funds to which UW faculty can apply to initiate research on co-operative education at Waterloo. One condition of the funding will be that each research project employs at least one undergraduate co-op student.*

Lead Responsibility: *Director of WatCACE, and Provost*

Resource Implications: *To be determined*

Action by: *In time to set budget for WatCACE for 2006-2007*

**32:** *A new group should be created to provide advice to CECS and Faculties related to employers’ needs and changing patterns of recruitment and hiring related to work opportunities for co-op and regular students. Emphasis on membership should be for people having expertise related to labour trends and demographics, and hiring practices.*

Lead Responsibility: *Provost*

Resource Implications: *Low*

Action by: *Decision whether to form such a group taken by January 2006; if yes, group has first meeting by April 2006*

**33:** *Career Services should focus on lifelong service to students and alumni. Career services for staff should be provided from other departments, such as Human Resources.*

Lead Responsibility: *Career Services*

Resource Implications: *Low*

Action by: *Ongoing, with progress report by April 2006*

**34:** *The present practice of providing alumni a specified amount of support at no charge to be followed by a charge to cover costs of services should be continued.*

Lead Responsibility: *Student Services Advisory Committee*

Resource Implications: *Low*

Action by: *Decision by SSAC by February 2006*

**35:** *The JobMine team, involving staff from IST and CECS, continue to improve the JobMine system, with particular attention to concerns identified by employers and students.*

Lead Responsibility: *CECS, with the Co-operative Education Council to help set priorities and to monitor*

Resource Implications: *Medium*

Action by: *Ongoing, with progress report by April 2006*

**36:** *All Coordinators should receive on-going training on the JobMine system, in order that they can provide continuous advice about it to employers. Every employer be given the opportunity to have a Coordinator provide hands-on advice related to JobMine.*

Lead Responsibility: *CECS*

Resource Implications: *Low*

Action by: *Implemented for winter term 2006*

**37:** *Career Services and Co-operative Education be kept together in one Department.*

Lead Responsibility: *UW (Deans' Council)*

Resource Implications: *Low*

Action by: *Before the end of 2005*

**38:** *Career Services review its activities to raise its profile on the campus, specifically targeting regular students.*

Lead Responsibility: *Career Services*

Resource Implications: *To be determined*

Action by: *Begin immediately, with report by February 2006 regarding action to take.*

**39:** *Career Services and Counselling Services develop a strategy to clarify their complementary roles, and, do that by not later than December 2005. Once that task is completed, the distinctive roles should be communicated to the Student Services Advisory Committee and to the Co-operative Education Council.*

Lead Responsibility: *Career Services, in consultation with Counselling Services*

Resource Implications: *To be determined*

Action by: *Strategy prepared by December 2005*

**40:** *By December 2005, the role and job description of the Assistant Director of Career Services should be reviewed and assessed.*

Lead Responsibility: *Executive Director, CECS*

Resource Implications: *Low*

Action by: *Revised job description submitted to Human Resources by February 2006.*

**41:** *The Executive Director of CECS assess the overall organizational structure of CECS to determine whether organizational changes should be made to allow CECS to be more effective in dealing with the changing environment.*

Lead Responsibility: *CECS Executive Director*

Resource Implications: *Medium*

Action by: *April 2006*

**42:** *The roles of Coordinators should be assessed by the Executive Director regarding their role relative to various options to maintain existing and to create new jobs, and to provide support for co-op students while on work terms. Particular attention should be given to establishing metrics to monitor effectiveness in dealing with those tasks. More generally, the Executive Director should establish a system for tracking and monitoring job development.*

Lead Responsibility: *CECS Executive Director, in consultation with Faculties, and Institutional Analysis and Planning*

Resource Implications: *To be determined*

Action by: *April 2006*

**43:** ***CECS and other recruitment groups at UW should develop an integrated marketing plan for co-operative education, and for specific co-op plans. The involvement of Faculties and academic units must be made explicit in this overall marketing plan. Marketing material prepared for prospective students should ensure that students and their parents have realistic expectations about the co-op experience at UW. One aspect to create realistic expectations is to provide one or more metrics about employment experience of co-op students.***

Lead Responsibility: *CECS and UW marketing teams*

Resource Implications: *Medium*

Action by: *March 2006*

**44:** *The President and the Vice-President, External Relations, should continue to explain to the government of Ontario the incremental costs incurred through the co-operative education model, with a view to have the value of BIU grants reflect that extra cost.*

Lead Responsibility: *President, and Vice-President, External Relations*

Resource Implications: *Low*

Action by: *Ongoing*

**45:** *UW continue its efforts to persuade the provincial government to increase the tax credit for employers of co-op students to at least reflect the cost of inflation since 1996, and also to emphasize that a higher tax credit be given to employers providing jobs for first-time work experiences*

Lead Responsibility: *President*

Resource Implications: *Low*

Action by: *Ongoing*

**46:** *CECS produce an annual statement of service, published on its web site, providing sufficient details on the CECS operation so that co-op students can have a better understanding of services covered by the co-op fee. The report should include the general principles underlying the CECS service. Steps will need to be taken to remind all co-op students that the statement is available. Publicity material to potential students will also need to provide information about CECS and the co-op fee.*

*The co-op fee continue to be assessed as an “all-pay” fee. This principle will need to be included in the annual report produced by CECS.*

*The Executive Director of CECS make a presentation to the Provost’s Advisory Committee on Student Fees (PACSF) in the fall term each year regarding the activities and expenses of CECS in the prior year and the plans for the upcoming fiscal year. The impact of any changes on the co-op fee will be part of the presentation.*

*UW, in consultation with students, revise the co-op fee-setting mechanism (including graduate plans where appropriate) to establish a starting base budget for CECS (excluding Career Services) with a corresponding co-op fee. Future increases should be based on CPI (Consumer Price Index) plus an amount for salary increases plus an amount required to increase/improve services as presented to the PACSF. Increases above the CPI and/or salary increases should be reviewed by the Co-op Education Council prior to being sent to the PACSF.*

Lead Responsibility: *CECS & UW (Deans' Council)*

Resource Implications: *Medium*

Action by: *April 2006*

**47:** *Once Career Services has completed, with Counselling, an overall strategy to meet career service needs of students (see Recommendation #39), it should estimate the base budget needed to support current services and to expand the services to reflect best practices related to career services for existing undergraduate students and alumni.*

Lead Responsibility: *Career Services*

Resource Implications: *To be determined*

Action by: *Estimate done in time for 2006-2007 budget*

**48:** *As with academic department reviews, a review of co-op and career services should be scheduled every seven years. The subsequent review should update this report, and is unlikely to require such an in-depth review.*

Lead Responsibility: *Associate Provost, Academic and Student Affairs*

Resource Implications: *Medium*

Action by: *Next review to be completed in seven years (by August 2012)*



## **5. APPENDICES**

### **Appendix 5.1 REVIEW TEAM AND PROCESS**

#### **5.1.1 Overview Committee**

Members of the Overview Committee, who collectively prepared this report, are:

Associate Provost, Academic and Student Affairs (chair): Bruce Mitchell

Administrative Assistant, Office of Associate Provost, Academic and Student Affairs: Frances Hannigan

Faculty representatives:

Applied Health Sciences: Judi Carter, Executive Officer

Arts: Emanuel Carvalho, Associate Dean, Special Programs

Engineering: Wayne Loucks, Associate Dean, Undergraduate Studies

Environmental Studies: Greg Michalenko, Environment and Resource Studies

Mathematics: David Taylor, Associate Dean, Undergraduate Studies, and Steve Brown (alternate),  
Associate Dean, External Relations

Science: Bob Linnen, Earth Sciences

Undergraduate student representatives: President, Federation of Students: Becky Wroe (2004-2005), John Andersen (2005-2006); Vice President Education, Jeff Henry (2004-2005), Howie Bender (2005-2006)

Resource people:

Co-operative Education & Career Services: Bruce Lumsden, Director; Cathie Jenkins, Associate Director;  
Keith Kenning, Associate Director

Waterloo Centre for the Advancement of Cooperative Education: Jim Downey, Director (2002-2005) and  
UW Past President; Gary Waller, Director (2005-); and, Pat Rowe (Psychology)

Institutional Analysis and Planning: Bob Truman, Director

#### **5.1.2 Process**

The committee's work included:

Reviewing previous reports and data related to co-op and career services.

Hearing or reviewing presentations by various individuals, starting in the summer 2004 (Appendix 5.2).

Designing approaches to obtain information from students and employers, and obtaining approval from the UW Office of Research Ethics.

Facilitating collection of information from undergraduate students (by focus groups) in the summer/fall 2004 and from employers (by survey) in the winter 2005.

Faculty representatives coordinating self-study reports by Faculties, plus providing suggestions related to self-study reports by Co-operative Education & Career Services.

Hosting a site visit by an external assessment team, 20 to 23 March 2005 (Appendix 5.3).

Preparing the report for UW.

## **Appendix 5.2**

### **PRESENTATIONS TO THE COMMITTEE**

20 April 2004	Jim Wilson (Northeastern University) and Jim Varty (Kettering University), “US experience with co-operative education”
12 May 2004	Bruce Lumsden and Kerry Mahoney (CECS), “UW Co-op and Career Services”
25 May 2004	Pat Rowe (Psychology), “Co-operative education and graduate studies” David Johnston (President), “Co-op at UW”
10 June 2004	Bruce Lumsden (CECS), “Enterprise Co-op”
21 June 2004	Bud Walker (University Business Operations), “Housing and Co-op” Laura Talbot-Allen (Vice President, University Relations), “Co-op and Alumni and Development”
18 October 2004	Amit Chakma (Vice President Academic and Provost), “Views on Co-op”
29 November 2004	Julie Hummel and Julie Kalbfleisch (Undergraduate Marketing and Recruitment), “Millennial Students and their expectations”

### **Appendix 5.3                    EXTERNAL REVIEW TEAM MEMBERS**

- (1) Nancy Johnston, Director  
Co-operative Education  
Simon Fraser University  
Burnaby, BC

Nancy Johnston served as the Chair of the external assessment team

- (2) Iain Klugman, President  
Communitech Technology Association  
Waterloo, ON
- (3) Bret Leech  
General Manager, Human Resources  
Operations  
Bell Canada  
Toronto, ON
- (4) Patricia Linn  
Dawson Professor of Cooperative Education and Professor of Psychology  
Center for Cooperative Education  
Antioch College  
Yellow Springs, Ohio
- (5) Marilyn Van Norman, Director  
Career Centre  
Keffler Student Services Centre  
University of Toronto  
Toronto, ON
- (6) Fred McCourt, Chair and Professor  
Department of Chemistry  
University of Waterloo  
Waterloo, ON

As the UW internal member of the team, Fred McCourt's primary role was to help the external assessment team members understand the culture of UW, and thereby be better able to develop recommendations and suggestions more likely to be acted upon.

The external review team visited UW from the evening of 20 March until the afternoon of 23 March 2005.

## Appendix 5.4

## GOVERNMENT OF ONTARIO, REGULATION 330/97, AMENDED AS REGULATION 268/00

“qualifying co-operative education program” means an educational program or course of study that meets the following requirements:

1. The program or course of study formally integrates students’ academic studies with work placements.
2. The program or course of study,
  - i. Includes work placements, each of which is at least 10 consecutive weeks and at least half of which are mandatory, that total not more than 75 per cent of the time spent in required academic study and that include mandatory work placements totalling at least 30 percent of the time spent in required academic study, or
  - ii. Includes one optional work placement of at least eight consecutive months and not more than 16 consecutive months that totals at least 30 percent and not more than 75 per cent of the time spent in required academic study.
3. All optional work placements taken under the program or course of study must be completed before the start of the final academic term.....
4. The Senate, board of governors or other governing body of the educational institution, through its authorized delegate, has given to the Director of the Corporations Tax Branch of the Ministry of Finance, or to his or her delegate, a document stating that the course of study meets the requirements .....

Ontario Regulation 268/00, Section 4, also specifies what is accepted as “qualifying work placement”:

For the purposes of ... the Act and this Regulation, a qualifying work placement is either a qualifying co-op work placement or a qualifying leading edge technology work placement.

- 1.1 A qualifying co-op work placement is a work placement in which a student of an eligible educational institution in respect of qualifying co-operative education programs performs employment duties for an eligible employer under a qualifying co-operative education program offered by the institution, if the following conditions are satisfied:
  1. The work placement has been developed or approved by the institution as a suitable learning situation.
  2. The terms of the work placement require the student to engage in productive work during the placement, not just to observe the work of others....
  3. The student is entitled to receive remuneration for work performed during the work placement.
  4. The terms of the work placement require the eligible employer to supervise and evaluate the job performance of the student during the placement.
  5. The institution monitors the student’s progress in the work placement.

## 6. REFERENCES

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