

## ENVIRONMENTAL SCAN

### EXTERNAL SCAN

#### POPULATION:

The population of the Cariboo College Region is currently (1990) estimated at 142,280. By 1995, this figure will grow to 152,909, a 7.5 % increase, and by 2000 to 167,505, and increase of 18% over the 1990 base.

The majority of this growth will take place in the Kamloops area, where 62,900 are currently estimated to reside; that figure will rise to 68,300 by 1995, and to 75,500 by the year 2000 (rises of 8.6% and 20% respectively).

Ministry of Education Grade 12 Enrolment projections to the end of the century indicate that the 1990 figure of 1919 for the five school districts in the College region will drop to 1770 in 1995 and to under 1770 by 2000.

(chart: Grade 12 Enrolment, 1990-2000)

Using the Central Bureau of Statistics population figures above, we can calculate the regional participation rate at 21.2 FTE ( Head Count: 33.6) per 1,000 population (all ages). Breaking this down to **non** Vocational programs alone, we calculate 13.8 FTE and 25.7 Head Count respectively; our **Academic** rates alone are 9.0 FTE and 12.2 Head Count per 1,000.

The B.C. academic participation rate is 21.0 FTE per 1,000 population, the Canadian (without Quebec) 24.4. In other words, Cariboo's **academic** participation rate is low--less than half the provincial average, and far below the Canadian average. However, when we count in **all programs**, our rates rise considerably in comparison to BC and Canadian averages; and when we use as a population base those 18 years and older (those who are potential clients of post-secondary education), our rates show at 30.27 FTE and 47.90 Head Count.

Two enrolment scenarios can be constructed for the next four years (1991-5), one using quadratic regression, the other simple linear regression. Using total enrolment figures, the quadratic regression method yields an "optimistic" scenario, which sees College enrolment reaching 6005 heads by 1993, and 6858 by 1995. The simple linear regression method yields a more conservative forecast of 5222 in 1993 and 5611 in 1995. Measured against the 1989 enrolment figure of 4775 then, increases of between 447 and 1230 may be forecast on a three year horizon (to 1993), and between 836 and 2083 on a five-year horizon (to 1995). The most likely scenario lies somewhere in between these projections, probably closer to the "optimistic" than to the "conservative" forecast.

**ACTUAL & PROJECTED ENROLMENTS: 1980 -- 2000**

	Actual Enrolment		Projected Enrolment			
	Non-Vocational	Total	Model I Non-Voc	Model II Non-Voc	Model I Total	Model II Total
1980/81	1,944	2,928	1,838	1,780	2,695	2,842
1981/82	1,755	2,649	2,031	2,012	2,890	2,938
1982/83	1,991	2,932	2,225	2,235	3,084	3,060
1983/84	2,863	3,701	2,419	2,448	3,278	3,205
1984/85	2,746	3,611	2,612	2,651	3,473	3,375
1985/86	2,757	3,311	2,806	2,845	3,667	3,569
1986/87	2,888	3,580	3,000	3,029	3,861	3,788
1987/88	3,368	4,084	3,194	3,203	4,056	4,032
1988/89	3,127	4,128	3,387	3,368	4,250	4,299
1989/90	3,654	4,775	3,581	3,523	4,445	4,592
1990/91			3,775	3,669	4,639	4,908
1991/92			3,969	3,805	4,833	5,249
1992/93			4,162	3,931	5,028	5,615
1993/94			4,356	4,048	5,222	6,005
1994/95			4,550	4,155	5,417	6,419
1995/96			4,743	4,252	5,611	6,858

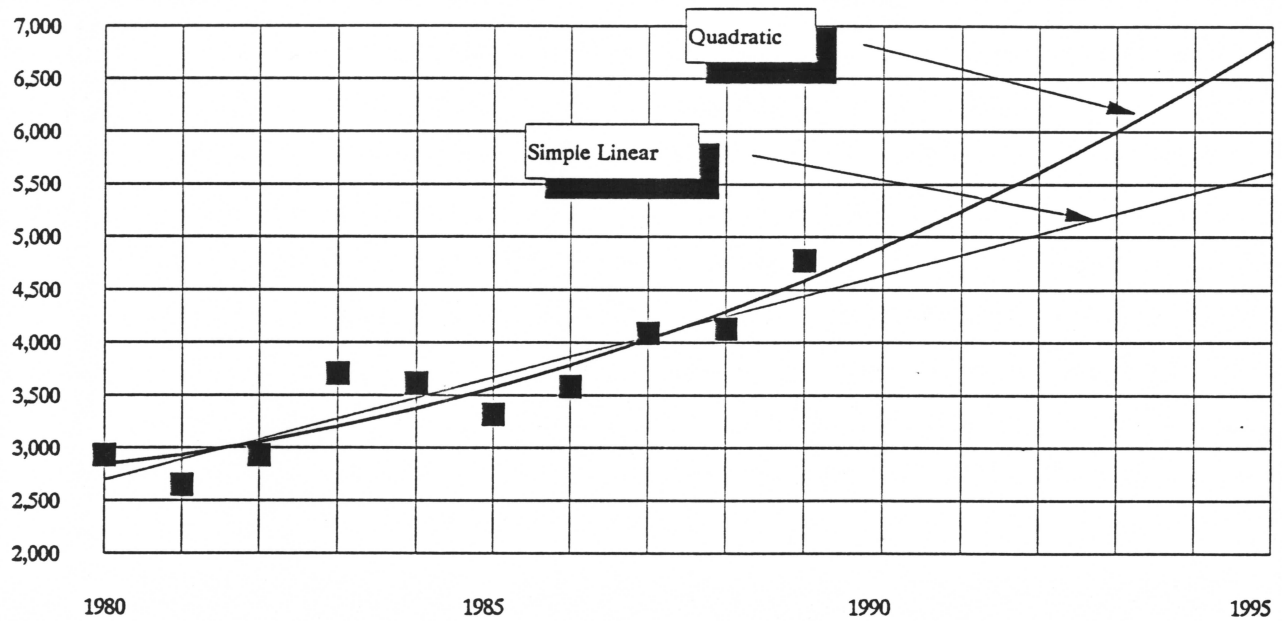
Model I: Simple Linear Regression

Model II: Quadratic Regression

**Note:**

Extrapolation beyond the range of observed data is based on the assumption that the trend line will be projected into the future.

**Actual vs. Projected Total Enrolments: 1980 -- 1995 ( A  
Comparison of Two Models: Simple Linear and Quadratic  
Regression Models)**



(table: Actual and Projected enrolments, 1980-1995)  
(Graph: " " " " " " )

Both scenarios assume no major in-migration to the College region, but rather the conservative population growth rate of 1.7% per year to 1995, and 2% p. a. to 2000. Adjustments would have to be made if any of the following factors came into play:

- (a) rapid economic growth in the region, attracting higher rates of in-migration than forecast;
- (b) establishment of Cariboo College as the institution of first choice for degree completion (currently UBC attracts most of our transferees, followed by SFU and UVic);
- (c) "reverse transfer" from UBC, SFU and UVic (this figure currently at about 2% of Cariboo's enrolment, and is unlikely to become a significant factor);
- (d) increase in numbers of degree, diploma and certificate candidates from outside the College region (it should be noted that 39% of first-year, first-time enrollees in 1989 were from outside the College region; the main attraction seems to be uniqueness and quality of certain programs);
- (e) increase in the "real" regional participation rate; this would involve targeting three demographic groups: (1) high school graduates, whose numbers will decline in the 1990's; (2) the 19-24 age group, who currently constitute the largest demographic group in the College's population; and (3) the over-30's, particularly over-30's females, who constitute the third largest group of the student body.  
( Chart: 1989 Age Distribution of Students)

#### Implications:

- In order to maintain and expand its recent enrolment patterns, the College will have to engage in aggressive recruitment of regional population "pool", augmenting the participation rates of high school graduates, the 19-24 and the less traditional 30+ groups; This will mean "target marketing".
- To continue to attract non-regional students, it will have to burnish its reputation for unique programming and excellence, and accentuate the distinctiveness of its degree programs.

As in most areas in B.C (and indeed Canada), the Cariboo College region population is ageing. In 1976, 58% of the population was aged 0 to 29; in 1986 (last Census figures available) this percentage had dropped to 48%. The 30-59 age group had risen correspondingly from 34% in 1976 to 40% in 1986, and the 60+ contingent from 8% to 12%. Throughout the 1990's, these percentages will shift another 10% so that the predominant group will be the 30-59 year olds.

#### Implication:

- These changes will have a bearing on the College's program mix, and indeed on the pedagogy and andragogy it adopts. While retraining programs will have priority, arts and lifestyle programming will also be of increasing interest to an ageing population.



The College gender-mix stands at six females to every four males. Part-time enrolments have traditionally accounted for 1/3 of the College headcount, and this ratio is expected to continue. Among part-time students, the two most dominant groups are females (19-24 years) and females (30+), especially in Career/Tech. and College Prep. areas.

Chart: Male-female enrolment ratio, 1985-9

Chart: Full-time: Part-time enrolments 1980-90

#### Implications:

- Given the substantial numbers of part-timers, programs and courses should be scheduled as accessibly as possible. This means ensuring that **all** courses are offered on a five-year evening rotation, that weekend and short-term courses are scheduled
- in short, that curriculum and delivery become much more flexible.

#### ECONOMY:

The augurs forecast that, having enjoyed a 3-4 year boom, the provincial economy is going to experience a downturn, following the pattern in Central Canada. As a result, operational funding will be tighter, and the post-secondary education system should not expect the kind of increases that it has received in the last 2-3 years; these are more likely to be in the order of inflation+1% or +2% increases.

According to the Open College Planning Council's Training Needs in B.C. (1989), the main problem facing the B.C. economy will be "structural unemployment"--that is, a mismatch between the skills in which large sectors of the workforce have been trained and those required by the "new" economy, resulting in skill shortages and long-term unemployment. Shortages are envisaged in the following growth industries: retailing, food and accommodation, health, construction, and financial and business services. Opinion leaders indicate that there is an under-supply of university graduates in general science, engineering, nursing and other science-based disciplines, as well as education and commerce\*. For example, the Canadian Engineering Manpower Board predicts a shortage of 30,000 engineers in Canada by the year 2000, as demand increases by 48%. In comparison, appropriate or perhaps even excess capacity exists in the arts and social sciences.

Service industries will continue to create the giant's share of new jobs. In the last decade, 92% of new jobs fell within this sector, which now employs 75% of the workforce. Training Needs in B.C. predicts that about 70% of employment growth in B.C. to 1993 is expected to occur in "white collar" jobs, particularly in the managerial and professional, clerical, sales and service sectors. Environment-friendly industries are expected to grow. An interesting statistic is that more than half the new jobs created will require employees who have an university degree--considerably higher than the 23% of current jobs held by degree holders. Conversely, the number of unskilled jobs (held by those who did not graduate from high school) will decline substantially from the current 18% to less than 5% of all new jobs. (Towards A Strategy For The 1990's: Developing A Foundation For Growth (Victoria : MAETT, 1990))

Given the population trends indicated above, much of the manpower needed to meet the demands of these new industries will have to be

supplied by "human resources development"--increasing individual education and marketable skills across the full spectrum of society at all age levels.

Implications:

- Cariboo College should respond to areas of economic growth and skill shortage with programming in business and finance, health, tourism and hospitality, construction technology and science-related subjects. Environment husbandry, biotechnology and engineering may provide opportunities.
- It should also target for education non-traditional clientele--native Indians, the handicapped, older women --who will be needed to supplement the workforce.

At the local and regional level, economic predictions are slightly more sanguine. The keynote of the City of Kamloops Official Community Plan (June 25, 1990) is "cautious optimism":

After finally rebounding from the lengthy recession of the 1980s, Kamloops appears to be moving towards a more diversified, sounder and less sensitive economic base. Reliance on the resource sector (primarily forestry and mining) has been ameliorated by the growing tourism, service and small manufacturing sectors, all considered growth industries for the next decade. The expansion of Cariboo College to a four year degree-granting institution will continue to provide a stimulus to the local economy, as will future community endeavours such as the 1993 Canada Summer Games.

Implications:

- The College should target programming in the tourism and service sectors but should be cautious in committing to forestry and mining oriented programming, and should expect to find little local employment for its technology graduates.
- Degree programs may be a strong suite, stimulating local population retention and even growth, which will have a "knock-on" effect on the regional economy.

**TECHNOLOGY:**

Technological change will continue to create demand for re-training; "life-long learning", involving clientele recurrently "looping back" into the post-secondary system, is becoming a reality. However, the post-secondary system is faced with the imperative of ensuring its staff keep current with the skills demanded by the workplace so that they can impart them to clientele. As well, the cost of high technology equipment does not appear to be abating.

Implications:

- Technological re-training needs will place a steady demand on College

resources. To respond to this demand, the College will have to invest heavily in development and re-training of its instructional cadre, and in the provision of current capital equipment.

#### **GOVERNMENT:**

While the full implications of the Canadian Job Strategy (CJS) are still unclear, certain Federal policies will have significant impact on post-secondary education. Chief among these are the increased emphasis on private-sector education, and elimination, by 1992, of CEC seat purchase. On the positive side, the Federal Government's ongoing campaign against illiteracy and its emphasis on basic upgrading and generic skills, as well as re-training, as the main instruments of its attack on structural unemployment will provide the College with opportunities in these areas.

Provincially, the future of the apprenticeship scheme is in doubt, which will jeopardize the continuation of apprenticeship classes at Cariboo. The implementation of the Grade 12 High School Graduation Program by 1992 (in response to the Sullivan Report) may enhance collaborative opportunities between regional high schools and the College.

The MAETT's main thrust appears to be towards implementation of an "accountability system" which will emphasize the concept of "value for money", and which may take the form of "operational audit" and collaboration between the Ministry and institutions on the formulation of management and performance measures.

#### **Implications:**

- Opportunities exist for the College in the areas of literacy programming, generic skills education and "human resources development." One of the challenges of the next few years will be reorganizing the curriculum to produce a greater emphasis on general education and generic skills that will assist students in their individual development and enhance their long-term employability. The burden of this will fall on career/vocational programming in the applied sciences and industrial technology areas of the College.
- The Industrial Technology Division will have to make good the deletion of seat purchase and the capping to the apprenticeship program by developing closer collaboration and generating "fee-for-services" contracts with industry. Opportunities for increased under-18 enrolments may present themselves with the implementation of the new High School Graduation Program in 1992, especially as students in the Exploration and Career Apprenticeship options look for courses not available at high school level.
- "Accountability" will place the onus on the College to find better and innovative ways to deliver its programming. Cost-effectiveness and cost-efficiency will increasingly drive the educational agenda.

#### **COMPETITION:**

Competition will come from various quarters. The establishment of the University of the North in Prince George will syphon substantial funds (\$167,000,000 for start-up alone) from the post-secondary allocation. Okanagan University College will pose a challenge to Cariboo for students and funding, and the provincial universities will continue

to attract students from the region. Private-sector training will constitute a particular challenge as governments pursue their policy of encouraging "in-house" training in the vocational sector. Another element of competition will be provided by the growth of private schools and institutions which will vie with Cariboo for career and vocational enrolments. Competition for funds will thus become fiercer, and the flurry of new program initiatives experienced in 1989-90 will dwindle to a trickle between 1991-4.

#### Implications:

- The College must persist in its efforts to offer quality programming in more effective and attractive ways than its competitors.

#### INTERNATIONAL OPPORTUNITIES:

Opportunities in the education of off-shore students will increase in the 1990's. Cariboo has been enrolling foreign students since 1984 and currently has 130 on campus. International accreditation arrangements exist between the College and the Canadian Colleges of Macau and Hongkong. Students come from all over the Pacific Rim. The College is providing forestry-related training in Indonesia and language training in Japan. Faculty exchange arrangements exist with China. The potential exists for great expansion in the international arena.

#### Implications:

- The College can enhance its reputation and revenue through strengthening its overseas contacts and increasing its enrolments of off-shore clients. Care will have to be taken to ensure that the proportion of off-shore clientele does not rise excessively in relation to Canadian enrolments.

#### SOCIAL AND CULTURAL ISSUES:

Illiteracy will continue to be afflict large sections of the population (as much as 25%, according to the Southam Press series of articles on that subject in September, 1988). In accordance with Federal policies, the College will continue to attack this problem, particularly through the Access Dept. in Developmental and Regional Programs.

The educational needs of the region's native peoples will continue to need specific attention. The College will continue to cooperate with native organizations such as NVIT and Secwepemc, and will strengthen its provision of service to native clientele by the appointment of Native Education and Support Co-ordinators on the Kamloops and Williams Lake campuses. Instructional programming and infrastructures will be improved at satellite campuses such as Merritt, Lillooet, Clearwater and 100 Mile House.



## **INTERNAL SCAN :**

### **Strengths**

Two immediately identifiable strengths are the logistical and physical locations of Cariboo College. Logistically, Kamloops, seat of the main campus, straddles four major highways--one leading to the Lower Mainland, one leading to the north of B.C., and two leading east and north-east respectively to Alberta. It is thus well situated to serve areas abutting on the Cariboo region to the east, south-west and north, and beyond; indeed, the fact that 39% of first year enrolments are from outside the College region testifies to its attractiveness as an educational destination.

Physically, Cariboo has an extremely attractive campus, and the recent acquisition of 40 acres of Crown land to the west of the campus provides ideal space for future expansion of facilities.

A third strength of the College is its comprehensive array of programming designed to serve the needs of various educational levels and interests within the region, ranging from Adult Special Education and College Access to degree completion, and from comprising a wide spectrum of occupationally-oriented programming.

Another strength is the proven quality of the product in some programs, which might suggest configurations of concentration for future development. Among these, it is worth noting RESPT, whose graduates have place first as a group in C.S.R.T. national examinations six times in the last eight years, and which has increased its intake to 90 for Fall, 1990; Nursing, whose graduates perform consistently well in the R.N. exams and which is developing a viable BSc N with solid enrolments; and the smaller MEDL program. As a group, these programs could provide a substantial base of candidates for BHSc and BHA degrees. So too could the current groupings of Mechanical and Construction Technology programs in the Industrial Technology wing--especially if they were provided with modernized provincial curricula.

Another strength is the College's computer infrastructure. The high ratio of mainframe terminals and p.c.'s per faculty and per student, and the relatively sophisticated nature of the software available argue for full exploitation of these resources in the shape of computer-oriented programming--not just in the academic sector, but in operations and management (CSOM), in applications (CADD, OAD, DAAD, CMMD, COMP ENGN), and in maintenance (TCOM).

In contrast to their Science and Technology counterparts, Arts and Social Science subjects have the great advantage of being low cost and (in most cases) capital-free. Arts students currently outnumber Science students by a ratio of over 2:1; Arts are currently more popular with almost 70% of the academic student body.

Having experienced problems in curriculum, delivery and morale, and declining enrolment respectively, in the 1980's, both Developmental and Regional Programs and Industrial Technology are showing signs of revival. In DRP, structural reorganization has given faculty a new lease of life and a chance to target more accurately the specific clientele they should be serving. In Industrial Technology, program



rationalization, improved utilization rates, regular program reviews and a rejuvenated sense of divisional pride suggest the emergence of a more dynamic division.

## **Weaknesses**

Paradoxically, the comprehensive nature of the College is a weakness as well as a strength. Given the limited funding scenario forecast above, it will be impossible for the College to expand on all fronts. Hard decisions will have to be made, focusing on expansion in a few areas at the expense of most programs. This will cause fierce competition, divisiveness and disappointment in many departments and units.

While in some ways providing a necessary "shot in the arm", the influx of new upper division academic faculty in 1989 has had an unsettling effect on the institution. It has brought with it questions of rank and hierarchy, and the appropriateness of existing structures of governance for the comprehensive university-college of the future. The resolution of these issues will provide a challenge over the next few years.

Another area of concern is faculty demographics. The bulk of Cariboo faculty are in their 40's or 50's; unless addressed immediately, this "ageing faculty syndrome" will cause middle-management and leadership problems by the end of the 1990's, when a large portion of faculty may choose to retire. Faculty are also largely not prepared for the move to a four-year, degree granting institution: the 31% with Masters degrees are effectively marooned at first and second year instructional level, unless they take their Ph.D's; only 17% of faculty hold a Ph.D (as compared to 10% in 1988/9).  
(table: faculty by appointment, 1989-90)  
(piechart: faculty by qualifications)

In the Career/Vocational areas, a serious concern is loss of instructional currency; recognition must be given to the fact that information and technology are now progressing exponentially, and that two weeks of professional development are simply not enough to absorb the changes that are taking place annually. Improved professional development is thus a critical issue.

Another serious concern in these areas must be outdated, deteriorated and inadequate capital equipment. This situation is the principal deterrent to the provision of new programming, let alone state-of-the-art instruction, in the Industrial Technology and (to a lesser extent) Science divisions.

Facilities, too, constantly seem to be strained to breaking point. A two-three year time lag exists between enrolment numbers and the provision of adequate instructional and administrative space. The demands of satellite campuses such as Williams Lake and Merritt, and the imperative to provide permanent outposts in Lillooet, Clearwater, Lytton, etc., place additional strain on the College.

Specifically, by division, the following weaknesses may be detected:

- Arts & Education, while strong in enrolments, need to develop a divisional plan which embraces central College goals. (Associate Dean Hansen's plan for cross-disciplinary thematic concentrations should be the blueprint

for this.)

- Sciences are weak in 3rd/4th year enrolments; caution should be exercised in expanding their number of upper division courses ; there are also substantial price tags attached to many of their proposed offerings, which may rule out expansion in certain areas (e.g. Physics, Chemistry, Geology--even Biology).
- Bus/Comp/Math are experiencing surges at all levels of enrolment; however, internally, there is still the problem of rationalizing Marketing Diploma and BBS offerings; OAD needs a thorough overhaul; Computing and Commerce are being over-ambitious for a three-year period (though potential exists for muted versions of their visions).
- Industrial Technology is hamstrung by limitations in facilities and program intakes; to expand, it really needs a massive infusion of capital and new facilities; opportunities for cooperation with industry are limited by the shallow and disparate industrial base in the College region.
- Developmental and Regional Programs have to (a) re-establish their image and credibility within and outside the College community; and (b) re-build the regional infrastructure largely dismantled in the 1980's.

#### SUMMARY:

Cariboo College is poised on the brink of a challenging decade. If it can establish itself as a viable and more progressive alternative to the traditional degree programs offered by other BC universities; if it can harness the energy and enthusiasm currently manifest among faculty and staff and translate it into low-cost initiatives which **build upon existing structures and avail themselves of parallel initiatives**; if it can extend the reputation of its programming (not only at degree level, but in some of the areas of excellence mentioned under "STRENGTHS"), and thus maintain--even increase-- the proportion of extra-regional students; if it can regain some of the ground lost in the mid-80's in native and regional education; and if it can attune itself to the changing regional economy and think "small business", "service" and "tourism", "environment" and "new technology", as opposed to "industrial intensive, it could parley the challenge into success.

## SUMMARY OF DIVISIONAL PLANS:

### Arts and Education:

Like the rest of the College, having experienced two years of rapid growth (1989-91), Arts and Education will engage largely in consolidation between 1991 and 1994. The B.A. program should anticipate maximum enrolments (90 FTE in 3rd and 4th year) over the three-year period. Pressure on facilities will be eased by the completion of the General Arts Building in 1992.

As the College is committed to a general arts degree designed to prepare students for professional training or the workforce rather than the narrowly-focused "major", the challenge to the Division will be to marshall its resources and ingenuity in the construction of comprehensive yet rigorous and thematically integrated curricula that will serve this purpose. Associate Dean Hansen's plan for thematic concentrations points the way.

Communication Arts will explore a co-op option in Practical Writing with a view to implementation by 1993.

In addition to its existing Elementary option, the B.Ed. program intends to offer a Secondary option by 1992. (1992: 30 FTE; 1993: 50 FTE?) Housing for this program has to be considered.

The second year of the B.S.W. degree will be come on stream in 1991, involving 30 FTE; the third year (30 FTE) in 1992; and the fourth year (another 30 FTE?) in 1993/4.

At diploma and certificate level the following will take place:

Program	Activity	FTE	Date
CMMD	lab demo	20 (unchanged)	1992
ECED	WM. Lake: diploma specializations	no change: pt. time inst.	1991
	Kamloops: Infant/Toddler specialization	pt. time inst.	1991
	Teacher Assistant Certificate	20 FTE (?)	1991
FINA	Sculpture/3D courses	no increase; 1 Faculty	1991
	Computer Graphics option		1992
	Expand Print-making	expand facilities	1993
HSW	Mental Health specialization	pt. time inst.	1991
	Child/Youth Care Diploma	30 FTE (?)	1992

## **BUSINESS/MATH/COMP:**

This division's main thrusts will be as follows:

- in Commerce and Economics, a stand-alone School of Business Studies, with 200 FTE and 30 faculty.
- Math and Statistics: cautious expansion as upper division numbers warrant; establishment of a MATH Resources Centre by 1993.
- Computing: cautious expansion as upper division numbers warrant.
- Computer Access Centre: 1 new micro lab to accommodate clientele in medical, legal, accounting and micro-systems management and self-paced options (1991-93).
- Business Administration: focus will be on offering a full two-year Marketing Diploma at WM. Lake by 1993; it will also explore Co-op. options in Accounting Technician (1992) and Marketing (1993).
- Office Administration: new programs in ARMA, Automated Office Systems, CPS, Dental receptionist, hospital clerk, Tourism receptionist, etc
- Tourism sees itself as (a) introducing a diploma program in Adventure Guiding (1991) (this should be cross-referenced with Physical Education program revisions); (b) offering Food and Beverage Management on a full-time basis (1991); (c) offering Tourism Supervisor outside Kamloops (1991); (d) consolidating its Recreation Management diploma into an Associate degree (1992); and (e) establishing a Co-op diploma in Tourism, Economics and Marketing (1992).
- The Cariboo Management will double its staff by 1993, will offer revised Management Skills for Supervisors, Women in Management, and Executive Development over the period, and will organize its first Summer Institute (1991).

## Developmental and Regional Programs:

Main thrusts here will be in Literacy and Native Programming, with some emphasis on refurbishing College Preparatory offerings.

### Adult Special Education:

- (a) convert SWP to base budget by 1991;
- (b) establish ASE courses in Clearwater, Lillooet, Merritt and Chase by 1992/3;
- (c) request Information & Facilities services to improve physical access to various campuses-- ongoing.

### College Access:

- establish fixed intakes at Wm. Lake (1991),  
Merritt and Lillooet (1992),  
Clearwater (1993);
- establish a Regional Resources Centre (1993).

### College Prep.:

- Native Education Co-ordinator (1991);
- developmental and retention measures such as Reading Courses, study skills and student success programming, needs assessment, peertutor support, summer school;
- review of Distance Education (1992).

### ESL:

- Contract Programs (ongoing)
- Prevocational literacy (1991)
- Non-College Prep. ESL (1991)
- Language Lab. (1991/2)
- English at Work (1992)

### Regional Programming:

#### Williams Lake:

- Program-level 2nd year Academic at Wm. Lake in Arts (1991);
- full diploma programs in Marketing, LTCA, HSW and Nursing (1992);
- Native Student Co-ordination;
- campus facilities improvements.

#### 100 Mile House:

- Expanded programming -\$160,000 1991-4;

#### Lillooet:

- expanded programming--\$150,000 1991-4;

#### Ashcroft/Cache Creek, Barriere, Chase, Clinton, Lytton, Logan Lake:

- mini-centres (1991)--\$10,000 per unit per annum.

#### Kamloops:

- Comprehensive Learning Centre (1992).



## Science and Health Sciences:

The main focus here will be in the areas of Health Sciences, Biological Sciences (Including Biotechnology and Environment/Resources Management), and Engineering.

At degree level, programs will be created in the following areas:

- Health Science (with options in Respiratory Therapy and Health Science Administration) (1991);
- Environment/Resources Management (1991);
- Applied Science (with Industrial Technology) (1992).

Cautious expansion will take place in some (but not all) subject areas.

The Engineering Program will be extended to 2nd year level in Electrical (1991), Computing (1991) and Mechanical (1992).

The 3-year Nursing diploma will be fully in place in Wm Lake by 1992

Two-year diplomas will be introduced in the following:

- Biotechnology (1991)

Contingent on expanded facilities, ANHT will expand intake from 24 to 30 in 1993.

A Distance Education Laboratory assistant program will be offered in 1991.

Certificate programs will be introduced in:

- Veterinary Receptionist (1992): 30 FTE
- Veterinary Assistant (1993): 30 FTE
- Horticultural Therapy (1993): 20 FTE: \$25,000 required for greenhouse.

Post-graduate diplomas will be offered in :

- Adult Critical Care (1991)
- Neonatology (1991)
- Cardiopulmonary care (1991).

## **Applied and Industrial Technology:**

The major requirements of Industrial Technology are equipment acquisition and renewal, and an upgraded or new facility. Depending on upgraded (1992) or new (1995) facilities, program initiatives will be launched in some or all of the following:

Truck Diver  
Sausage Maker  
Avionics Technician  
CAD/CAM Technician  
Millwright  
Mechanical engineering Technologist  
Parts Service Technician etc. (see full list in divisional plan).

Initiatives will be taken in Integrated learning (1991).

The "laddering approach " from technician to technologist and then to degree level will be vigorously implemented, starting with CADD (Sept. 1992) and Mechanical Trades (Sept. 1993). Associate degrees in technology will thus be in place by 1993, and in conjunction with Sciences, degrees in Applied Science and Technology will be implemented between 1993 and 1995.

Other opportunities in which Industrial Technology may become involved are the development of the a Bachelor's in Vocational Education and a Bachelor's in Industrial Education.

## **Cooperative Education:**

Cooperative Education will continue to expand as a College-wide service and will be offered as program options in CADD, CTEC and TCOM (1991); Accounting Technician (1992), and Applied Writing (1992); and Marketing (1993). Other opportunities may open up at degree level in Accounting, Marketing and B.A degree concentrations from 1993 on, as these degrees establish themselves.

Industrial Technology and Co-operative education seem to be the best launching pad for a Graduate Placement Centre (1991).