

## TITLE PAGE

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1. Plan Applicant

Name: Ronald Meng

Title: Program Chair

Authority/Representing: Economics

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2. Plan Focus

Program: Economics

Area:

AAU: Economics, Mathematics and Statistics

College Engineering and Science:

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Plan Title: The Five Year Plan for Economics

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3. Brief Abstract of Plan

The department of economics plans to improve our current reputation as a very productive research group, maintain our position as a service resource accessed by a large number of programs and students, continue providing good quality BA, BSc, and MA degrees to a relatively small group of students, and obtain a modest increase in the size of this group. To these ends we herein commit ourselves to precise and quantified annual targets with respect to publications in peer reviewed journals, grants obtained, student enrollment units per faculty member relative to those in other programs at this university, the number of our majors and MA students, and the technical competence of our information delivery in large classes. To attain these objectives we propose activities that are not flamboyant but are, we believe, likely to prove effective. These activities include: the use of course loads as incentives for research and grant activity; moderate revisions of our course offerings to improve our service role, catch student interest, and fill our unique niche within the chosen foci of this university; support for the initiatives within Statistics and the proposed operational research program; and, the implementation of a degree completion

program with the Anshan Institute of Iron and Steel Technology in China and a start on the extension of such programs to other carefully selected foreign universities.

In the following plan the net increases in the number of faculty in the department are tied in a very clear and measurable way to our success in hitting our targets. In year 1 and succeeding years the university maintains our existing establishment. In year 1 there is no net increase but our activities and objectives are not null. Thereafter (for years  $t = 2,3,4,5$ ) if, on the average, we have hit our targets in year  $t-1$  then in  $t$  we get the requested net increase in faculty; otherwise the net investment is zero.

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**Sign Off**

Appropriate AAU Head (s) (Please indicate who will need to sign off) is/are:

Name	AAU	Initial	Date
Harold Atkinson	Economics, Mathematics and Statistics		

Appropriate Executive Dean(s) (Please indicate who will need to sign off) is/are:

Name	College	Initial	Date
Richard J. Caron	Engineering and Science		

**Paper Flow**

Each Appropriate AAU Head indicated will receive a paper copy.

Each Appropriate Executive Dean indicated will receive a paper copy.

The Vice-President Academic as chair of the Program Development Committee will receive a paper copy.

The version delivered to the Vice-President Academic shall contain the dated signatures of those indicated as appropriate to sign off.

In addition this form (on disc or through Email )will be sent to:

Program Development Committee  
 c/o Office of the Vice-President Academic  
 5<sup>th</sup> floor Chrysler Hall Tower  
 Email: Vice-President\_Academic@uwindsor.ca

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## THE FIVE YEAR PLAN FOR ECONOMICS

### 1. GOAL

The University of Windsor has been ranked fifth among Canadian universities in econometric theory (see, Badi H. Baltagi, "Worldwide Institutional Rankings in Econometrics: 1989-1995", Econometric Theory, 1998, pp.1-43). Our research goal is (G1) to maintain this ranking and to extend it to other areas of economics (cf. R.H. Paul, "The Best of Both Worlds" A Blue Print for the Affirmation and Renewal of the University of Windsor , November 24,1998 (hereinafter BOBW), p.6 #8). At the graduate level our goal is (G2) to continue offering an MA programme whose graduates are able to gain entry to, and financial assistance for, PhD studies at major universities ( 50% of our MA grads currently go to advanced studies). At the undergraduate level our goals are: (G3) to continue offering a very high quality program to a relatively small number of majors and to 'pay the bills' by providing service courses; (G4) to improve and expand our service role ; and, (G5) to improve both teaching efficiency and quality of learning in our large classes.

The above goals are intended to serve what we believe to be the relevant priorities, namely: (P1) the advancement of knowledge; (P2) the improvement of the reputation of this university; (P3) support for the chosen foci of this university; (P4) the provision for our own majors and MA students of a "degree that works"; (P5) the support of other units in their efforts to provide degrees that work; (P6) accountability to the funders of this university (in particular, students, parents, and taxpayers); and, (P7) service to the economics profession.

### 2. OBJECTIVES

The specific measurable outcomes that culminate in, and indicate the achievement of, our goals are as follows.

Objective O1 is to insure that the three year moving average of our publication rates in refereed journals is at least 0.44 in year 1, 0.48 in year 2, 0.52 in year 3, 0.56 in year 4 and 0.60 in year 5. Since publication rates vary greatly across disciplines we provide the following context in which this commitment can be judged. The available data on publication rates for economists in Canadian universities show a rate of 0.4 per year in 1986-90 (see, R.F. Lucas, "Contributions to economics journals by the Canadian economics profession, 1981-90", Canadian Journal of Economics, 1995, pp.945-60). Hence we are committing our department to do 10% better than the Canadian average in year 1, 20% better in year 2, 30% in year 3, 40% in year 4 and 50% better in the final year. An individual with a rate of 0.6 in 1986-90 would have been in the top one third of Canadian university economists.

Objective O2 is to increase the number of active (i.e., published in a peer reviewed journal within the past two years) faculty from 8 (out of 15) in year 1 of the plan, to 9 (out of 16) in year 2, 11 (out of 17) in year 3, 12 (out of 18) in year 4, and 14 (out of 19) in year 5 (i.e., the ratio of active to total faculty will move from 0.53 to 0.56, 0.65, 0.67, and 0.74 over the planning years).

Objective O3 is to maintain total annual research grants at or above the value of one MA teaching assistantship (\$7000) multiplied by the number of active faculty with at least two years experience.

Objective O4 is to maintain the number of MA students at approximately two per active faculty member with at least two years experience.

Objective O5 is the maintenance of the semester enrollment units per faculty member in our program at or above the median for all programs for which appendix c type data are available.

Objective O6 is to keep the number of (first) majors near their current level (between 45 and 50) for the first three years of the plan, and to get a very noticeable increase in the last two years to about 60 in year 4 and 75 in year 5 (see activity A3, section 6).

Finally, under O7 we are committed to extend the new teaching technology of computer interactive lectures and companion internet presentations, recently introduced in the first semester introductory course, to the second introductory semester in 00/01, to second year microeconomic theory in 01/02, to second year macroeconomic theory in year 02/03, and to all remaining courses

having an enrollment of 30 or more in 03/04 (cf. BOBW, p.4 #8).

The main direct connections among our goals, priorities and objectives are shown in the last three columns of Table 1 (column 1 is described in section 6). In the next section we comment on these relations.

TABLE 1  
ACTIVITIES, OBJECTIVES, GOALS, PRIORITIES--MAIN DIRECT RELATIONS

These ACTIVITIES	yield these OBJECTIVES	that lead to these GOALS	which serve these PRIORITIES
-- A1(motivate) A6(stats & OR) A7(speakers)	O1(per cap pubs) O2(8 active faculty) O3(per cap grants)	G1(high dept rank)	P1(knowledge) P2(reputation)
-- A1(motivate) A2(MA options) A7(speakers)	O1(per cap pubs) O2(8 active faculty) O4(MAs per cap)	G2(quality MA)	P4(degree that works) P7(serve profession)
-- A1(motivate) A3(completion) A7(speakers)	O1(per cap pubs) O2(8 active faculty) O7(technology)	G3(quality BA/BSc)	P4(degree that works)
--- A1(motivate) A4(service options) A5(feedback) A6(stats & OR)	O2(8 active faculty) O5(8 SEUs) O7(technology)	G4(service role)	P3(university foci) P5(degrees that work)
-- A1(motivate) A2(MA options) A3(completion) A4(service options)	O2+O4(=8 MAs) O5(8 SEUs) O6(8 majors) O7(technology)	G5(efficiency)	P6(accountability)
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### 3. RELATION OF GOALS AND OBJECTIVES TO UNIVERSITY AND OTHER PRIORITIES

The relationships among the preceding objectives, goals and priorities are too interrelated and synergistic to be described in detail in the allotted space. We provide selected comments on Table 1 in this section..

Regarding goal G2 (quality MA) and priorities P4 (degree that works) and P7 (serve profession), our MA is clearly a “degree that works”. Not only do fifty percent of our graduates proceed to further studies elsewhere, but one or two a year get their MA paper published in a refereed journal (co-authored with the supervisor). Further, our program is well known as one that accepts persons with undergraduate training in areas directly related to Economics (especially Mathematics and Statistics) and upgrades their knowledge of Economics so that they are accepted into, receive financial assistance from, and succeed in PhD programs at major universities. In this endeavour we have already created a niche for ourselves in Canada.

It is clear that, provided we adhere to well defined criteria for MAI and MAII admissions, OCGS has no problem with our intent to continue performing this service for the profession. OCGS has expressed pleasure with the performance of our younger faculty, and noted that our graduates “are, for the most part, well qualified to undertake further studies or employment” (letter, June 9.1999).

Goal G5 (efficiency) and priority P6 (accountability) require programs of efficient size. The size of our graduate program fluctuates and is sometimes below optimal. Three major impediments inhibit its stabilization and expansion. First, our only full-time faculty member qualified to give graduate macroeconomic theory is also our only expert in finance economics and neural networks. Hence we are hard-pressed to provide adequate preparation in areas that are always relevant and currently ‘hot’ [cf. O2 (8 active faculty)]. Second, in the spirit of the best of both worlds we have established our niche in Canada by concentrating, for some years, on the discipline’s core areas (microeconomic theory, macroeconomic theory and econometrics) and offering few graduate options. This severely limits the number and kinds of students that we can attract. A very selective expansion of options appears to be advisable (see activity A2, section 6). Finally, we are at a disadvantage when potential MA students compare funding here and elsewhere. Our active faculty

consistently provide research assistantships, which make the funding closer but not equal to that in competing programs [cf. O2 (8 active faculty), O3 (per cap grants), and O4 (MAs per cap)]

The goal of having a high quality undergraduate programme with relatively few majors while paying the bills by providing service courses is optimal for economics departments in small and medium sized universities. This aspect of the “best of both worlds” has long been accepted wisdom among economists and among administrators at this university. The goal is optimal because the pervasiveness of Economics in everyday life makes the study of various parts of it essential for many and diverse disciplines. It is therefore desirable that we offer a good selection of service courses. The existence of these courses, in turn, so lowers the marginal cost of offering a BA and/or a BSc in Economics that efficiency demands the existence of these programs despite the relatively low demand for them at less-than-large universities. Consider, for example, the effect of the interdisciplinary program in Business and Economics. This program, housed in Business Administration and serviced by Economics, has a substantial enrollment. Students must take at least 14 courses in Economics. With the addition of one semester of economic statistics, these 14 “service courses” are sufficient for the Economics requirement of the three year BA; there is virtually no addition to cost in terms of required courses attributable to this degree. Similarly, other second and third year courses such as Canadian Public Finance, Law and Economics, Economic Development, Economic History of Canada, and Labour Institutions are relatively popular service courses that provide, at virtually zero added cost, options for our majors. The careful expansion of this set of option courses would both greatly enhance our own degree program and those that we service.

#### 4. CURRENT SITUATION

Faculty Profile. We have 14 tenured faculty, six were hired within the past 12 years and 8 have been here for between 15 and 40 years ( 4 will retire within 5 years). The six recent hires are publishing in well ranked journals while over half of the ‘old timers’ are not. The latter’s commitment to the department is their willingness to shoulder relatively heavy teaching loads (our intended introduction of new teaching technologies is not unrelated to the schedule of retirements). We have no sessionals and limited overload teaching.

On the basis of publications in theoretical econometrics during the first half of this decade Dr. Fan is ranked in the top 100 in the world and in the top 10 in Canada (see Baltagi, op. cit) (and her publication rate has increased in the second half of the decade!). There are no recent data for publication rates in other areas of Economics but, if the relative frequency distribution given by Lucas (op. cit.) for all areas during 1986-90 is stable, then during 1995-99 Fan and Gencay ranked in the top 4% of Canadian academic economists, and Suh and Wen ranked in the top 11% . It should also be noted that during 1986-90 the per capita publication rate among all academic economists in Canada was 0.4 per year (ibid) while ours averaged 0.48 over the last three years. Although we are unable to update the ranking of the department in all areas of Economics, the preceding observations indicate a continuation of the improvement noted by Lucas (from 23rd out of 33 in 1980-85 to 16th in 1986-90, and from 3rd to 2nd among the 13 non-PhD granting departments)

Turning to peer reviewed competitive grants, the data provided on the website by Institutional Analysis were used to compute SSHRC grants received in this university and in our department for 1996 to 2003. These data indicate that our department accounts for 37% of the university total and ranks first among the 15 programs that obtained SSHRC funds (the next highest department was Philosophy with 16%). On a per faculty EFTS basis the result is the same; our department ranked first with an average of \$3818. In terms of the peer reviewed competitive grants from SSHRC and NSERC for 1996 to 2003, our grants per faculty EFTS ranks 9th out of 28 departments, the eight above us being from Science and Engineering. In terms of total grants (as defined by Institutional Analysis) per faculty EFTS for 1996 to 2003 our department ranks 13th out of 28, ten of those above us being from Science and Engineering.

The instructions for writing this plan ask for a comparison with national standards. We are not aware of any such explicit comparisons involving cross classifications by both university and

discipline. We can however provide the following indications of our national standing with respect to SSHRC grants. Maclean's reports these grants per eligible faculty member, and the proportion of eligible faculty receiving them, by university in 1999. The comprehensive universities are ranked using these data and Windsor is tenth out of the 12 universities. If the datum for this university were replaced by the \$3818 of our department, Windsor would rank third. Of course, this result could reflect higher grants to economists (relative to other eligible grantees) at all universities. To check this we obtained grants data for all Economics departments at comprehensive universities for 1994 to 1997 using SSHRC's Grants and Fellowships Awarded (kindly supplied by Research Services, more recent data were not available at the time of writing) and total faculty for 1999 in each department from their website. These data (available on request) show that our department ranks second (to Guelph) in terms of dollars per faculty and third (behind Guelph and Waterloo) in the proportion of faculty receiving grants.

Placements, Entry Averages, Graduation Rates and Enrollments. The available data for placements of Economics grads are based on only six responses. Of these six, five were employed within two years and one was not looking for work. Four of the five employed reported that their work is related to the skills acquired here. The available data on the entry averages of our majors are based on only nine students. They indicate that the average (72.2) is slightly below the university average (74.9). This is consistent with our graduation rate which is 59.1% compared to the university average of 61.4 (computed from the 26 rates published by Institutional Analysis).

Over the three year period 1995 to 1998 (1999 data were not available at the time of writing) our first majors (full and part time) FTEs fell from 36.4 to 24.0 (-34.1%) and the FTEs of our MAs rose from 7.9 to 13.3 (+8.3%). From 1996/97 to 1998/99 SEUs in our department declined from 3680 to 2864 (-22.2%). This rate of decrease exceeds that in total university enrollment and, although our SEUs remain above the university median (see p. 11, second paragraph), it suggests that we should improve our service courses (see activities A4 and A5 in section 6). The increase in our MAs could be a trend if we make moderate adjustments in the option courses available and in research assistantships (see activities A1 and A2 in section 6).

## 5. JUSTIFICATION / RATIONALE

One must distinguish between the societal need for a knowledge of Economics and the

market demand for professional economists. The market demand for professional economists is rather limited and we do not anticipate any great change in this. However, the rationale for a program in Economics at a small or medium sized university is not to be found in the market demand for professional economists. Instead, it is to be found in the societal need for a knowledge of Economics, the consequent fact that most professional people (business people, lawyers, ecologists, union leaders, politicians, etc.) need a considerable familiarity with the discipline, the resulting high demand for courses in Economics, and the implied optimality of the undergraduate Economics degree. For this reason undergraduate degrees in Economics are available at all universities. The formal course content of these programs does not vary significantly but there is great variation in the reputations of the departments in which they are housed, the currency of the knowledge of their faculty, and the acceptability of their graduates into graduate programs and employment. Therein lies the rationale for our goals of a sizeable service role (G4), and a quality BA/BSc (G3) combined with a good reputation for scholarship (G1), all provided in the most efficient fashion (G5).

Regarding our service role it is important to note that, despite the SEU declines noted in section 4, the Economics program's share of SEUs is very marginally above the median in any meaningful comparison. One such comparison uses raw SEU shares among comparable areas. For Economics two groups of areas are reasonably comparable: the eight science departments in our new home in the sciences and the eight units (7 departments and 1 school) in our former home in the social science faculty. In both cases, in 1998/99 three units had more SEUs than did Economics and four had fewer. A second way to make meaningful comparisons is to normalize the shares by some appropriate division and then compare among all areas. Using faculty EFTS to normalize the SEUs of the 30 areas of study for which appendix c type data are available gives the following result. Economics, with 178.4 SEUs per faculty EFTS, ranks fifteenth out of 30 areas.

Alternatively one can use total budget to normalize obtaining area SEUs per dollar (the reciprocal is the direct cost per SEU). When the resulting data are ordered from highest SEU per dollar to the lowest, Economics (with 1.698 SEUs per thousand dollars of budget) ranks fourteenth. In summary we have a sizeable demand for our service courses and we plan to increase it.

The justification for G2(quality MA), G1(high dept rank), and the related objectives is found in the fact that our MA program is very well respected and has an established and unique niche in

Canada. This accords well with the claim that “We are determined to build a much stronger graduate component ... the university has a rare opportunity to strengthen its research record and culture in ways that will be felt for many years to come.” (Dr. Ross Paul, “Message from the President”, Graduate Studies & Research at the University of Windsor, undated, p.1).

## 6. ACTIVITIES

The following activities are summarized in column 1 of Table 1.

The activities that led to our success in G1(high dept rank) begin with: A(1) hire the best

available scholars, and then reward their successes. We have proven our ability to hire the best [when supported by the administration (cf. BOBW, p.7 #13)] as indicated by publications, grants, and external distinctions such as Suh's receipt of the Polanyi prize and Gencay's appointment as Director of the Canadian Econometric Study Group. A proper system of "incentives for superior performance" is a priority here (BOBW, p.14-15). Action on most such incentives lies beyond the individual AAU [we emphasize however that unless salary incentives are introduced soon we will lose our high quality faculty (cf. BOBW, p.4 #5)], but we can use course loads as an incentive. We plan: six or five courses (depending on class size, new preparations, and innovations) for non active tenured faculty; four for members in the first two years on faculty (consistent with their preferential treatment for internal grants) and for faculty who are active but not providing research assistantships; three courses for active faculty providing one research assistantship (\$7000); and, two for active faculty providing two research assistantships. Such release time will improve the chances of obtaining a grant (especially if teaching assignments can be arranged to free-up the semester when grant applications are due) and provide a small incentive for superior performance. The assistantships will attract more good quality MA students.

Activity A2 is to begin fourth or fifth year courses in finance, environmental economics, and public finance in years 2 to 4 and, contingent on the enrollment in them in year 4, a second semester in one or two of them in year 5. The public finance course was popular when we had resources to offer it, and environmental will be popular if this focus proves successful. The finance course will feature derivative trading (a "hot" topic), the use of econometrics (playing to our strength) and extensive use of the computer (attractive to an expanding group of students). The finance course will also be attractive to students in the following program.

Dr. Wen has proposed degree completion programs with universities in China to improve the quality and number of our majors. He has received a clear expression of interest from the Anshan Institute of Iron and Steel Technology (AIIST) and has been encouraged by our administration to proceed further (see also BOBW, p.6 #9 and p. 14 #12). Thus, A3 is to have a degree completion program with AIIST in operation by year 4. This accounts for the noticeable increase in the last two years in O6(8 majors). [Some of the resulting students will enter our MA program. This effect will not begin until after the plan's end, but it feeds into our preliminary thinking on the ten year plan for graduate studies (cf. BOBW, p.6 #7 and p.14 #13)]. We anticipate

an extension of the program to other universities, especially Jilin (with which our university already has a special bilateral relationship) and the Central Nationality university (cf. BOBW, p.20 dot #6).

Activity A4 is to make our undergraduate courses better suited to the new foci and to our service role. We plan A4: to introduce a second year course in labour economics (primarily to service business students) (in 00/01), environmental economics and the economics of crime and punishment (to accompany the popular law and economics course) (in 01/02), health economics (in 02/03) and finance (in 03/04); to revive ASAP the economic development course that was dropped on Burrell's retirement; and, depending on the enrollment in these courses, to add a second semester to one or two of them in 04/05. We have had discussions with the serviced areas. Further we plan (A5) to introduce in 00/01 a questionnaire on student perception of the course relevancy to their majors and to establish regular contacts with faculty in the serviced programs.

Activity A6 is to support the Ph.D program in Statistics and the proposed Operational Research program. Dr Fan will be providing a research assistantship in the former, Gencay was an initiator of the latter proposal, and Anglin, Gencay, Suh and Wen were on its founding committee. This activity will raise the research efficiency of grant expenditures by some of our faculty (they will have access to PhD students), improve their access to NSERC money, and contribute to the success of the new foci at both the graduate and undergraduate levels.

Activity A7 is to expand our speakers series. A moderate loosening of the financial constraint on the geographical location and length of stay of the speakers will have a significant payoff in terms of research output, reputation, and students' chances of acceptance and support in PhD programs. Finally, activity A8 is to become active in pursuing funding for group research such as strategic grants and industry collaborations (to date our grants activity have been individual efforts). We have established a committee to insure that all such possibilities are properly considered in our department.

## 7. RESOURCES.

The main resources required are faculty: six to replace five retirees and one limited term appointee; a net increase of one member in each of years 2,3 and 4; and, conditional on enrollment and the attainment of our objectives, a net increase of zero to two in year 5. We expect the appointments to be at the level of assistant professor, but we trust that the university will be

flexible if an exceptional candidate appears.

These requirements and their rationale are shown in Table 2. The entries showing the use of net investments in columns 2 to 5 are obtained by calculating the changes in course-giving

TABLE 2  
REPLACEMENTS AND PLANNED USE OF NET INVESTMENT IN FACULTY

	planning years				
	1	2	3	4	5
Total hires	2	3	1	2	0 to 2
Replacements	2	2	0	1	0
Net investment	0	1	1	1	0 to 2
Use of net investment:					
A1 (motivate)	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{4}$
A2 (MA options)	0	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	0 to $\frac{1}{2}$
A4 (service role)	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4}$	0 to $\frac{1}{2}$
A6 (stats & OR)	0	$\frac{1}{4}$	$\frac{1}{4}$	0	0
Other	-1	$-\frac{3}{4}$	$-\frac{1}{4}$	0	$-1\frac{1}{4}$ to $1\frac{3}{4}$

capacity required by the activity listed in column one and then converting these to faculty members on the basis of four courses per new member. The assumptions underlying the table are as follows. In year 1: under A1 one member currently carrying 3 courses goes to 2 (and remains at that level) and the course load of the two members being replaced was nine while that for the two replacements is eight; under A4 an increase of two service courses is required: and, under “other” two sections of the large courses are dropped (see O7) and two low enrollment course are dropped. In year 2: under A1 a second member goes from 3 to 2 courses (and remains at that level) and the eight course load of the replacements is two short of that of the retirees; under A2 one MA option is introduced; A4 requires two service courses: A6 will absorb the equivalent of one course (and continue to do so); and, under “other” three sections and/or low enrollment courses are dropped. In year 3: one member giving 4 courses qualifies for 3 (A1) (and remains at that level); an MA option is introduced (A2); another service course is introduced (A4) ; cooperation with statistics and OR absorbs the equivalent of two more course (A6); and, one section is eliminated by O7. In year 4 a retiree giving six courses is replaced ( the  $\frac{1}{2}$  under A1) and an MA option and a service course are introduced (A2 and A4). In year 5 another member qualifies for a

reduction of one course and, conditional on enrollment in the new second year and advanced courses, zero to two second semester courses are introduced in each category.

The net increases in faculty requirements are three plus an increase that is conditional in the final year. For concreteness we suggest that the last year increase be set tentatively at one , to be adjusted by plus or minus one on the basis of enrollments and the monitoring and evaluation processes discussed below. For interpretive purposes the resulting history of our faculty contingent over the 10 years 95/96 to 04/05 would then be: 19, 19, 18, 16 and 15 in years 95/96 to 99/00 respectively and 15, 16, 17, 18 and 19 in years 00/01 to 04/05 respectively.

Other resource requirements include the computer facilities needed to introduce and maintain the new teaching technology, three offices (and perhaps a fourth in year 5), computer equipment and office supplies required by the new faculty hires, library upgrades in the new teaching areas, and a budget for the speakers series. The financial details are shown in appendix a.

## 8. MONITORING.

We adopt what we understand to be the distinction between ‘monitoring’ and ‘evaluation’ described by Professor Gold in his email discussion (09/06/99) with Professor Samuelson. It is our understanding that the distinction lies in the differing continuity of each rather than in the criteria of success and failure.

The statement of our objectives has been so chosen that the extent of their attainment is easily measured; the only data required are those in annual updates of appendix c and the faculty CVs.

Further, the objectives are indexes of our success in reaching the more qualitative and less directly measurable goals. We propose therefore that the percentage attainments of our objectives be taken as the criteria of our success.

TABLE 3  
ANNUAL OBJECTIVES

Objective	Data	planning years				
		1	2	3	4	5
O1	Per Cap Pubs	\$0.44	\$0.48	\$0.52	\$0.58	\$0.62
O2	Active Faculty	8	9	11	12	14
O3	Total Grants	49000	56000	70000	84000	98000
O4	MA Enrollment	14	16	20	24	28
O5	University SEUs	\$median	\$median	\$median	\$median	\$median
O6	First Majors	45	47	50	60	75
O7	Courses over 30 with new technique	2	4	6	all	all

The precise annual targets are shown in Table 3. The quantification of O2, O3 and O4 requires an assumption on the number of years it takes for a new faculty member to become active. We have assumed that out of any group of new hires  $\frac{1}{4}$  obtain publication in an acceptable peer reviewed journal before one year after hire,  $\frac{1}{2}$  before two,  $\frac{3}{4}$  before three, and all before four years. This probability distribution was then used to compute the expected number of active faculty, the expected number of these who will have at least two years experience, and the implied grants and MA enrollments.

Progress toward our annual objectives will be reviewed at a faculty meeting in early January of each year. The program chair or his/her delegate will review our activities and provide projections of the extent to which we will attain our objectives. (The necessary preliminary data, such as papers accepted/under revision/submitted, grants obtained, enrollments, and feedback from A5 will be available at that time). A written report of this review and the resulting discussion will be distributed to the faculty and the VP Academic. With this report serving as background, the chair will discuss privately with each faculty member her/his contributions to the attainment of the objectives and the relationship of these to assignments under article 5 of the collective agreement, to activity A1(motivate), and to all other university-wide “incentives for superior performance”.

## 9. EVALUATION

Notice first that the number of tenure track positions requested is based on a one year lag; the net increase in resources in year 1 is zero but our objectives and activities are not null. That is, the new investment costs of our plan have been deliberately ‘end loaded’, thus allowing the following evaluative process.

If, in any year, we attain an average of 100% success in our objectives we expect to receive the resources and other support requested for the following year. If we fail to attain this success rate then, in the absence of any convincing (to the VP-Academic) reason to believe that such failure resulted from events that were unpredictable and outside of our control, the faculty hires for the following year will be revised to reflect a zero net increase and all other activities and

objectives will be reviewed, discussed with the VP Academic, and revised if deemed advisable. [We suggest, by way of an example, that the loss of a superior faculty member because of the failure of the university to introduce salary “incentives for superior activity” qualifies as a convincing reason.]

Conversely, if we achieve an average of over 110% of our objectives then the activities and resources planned for the following year will be reviewed with the VP Academic with a view to the possibility of an increase.

#### 10. SCHEDULE OF ACTIONS.

The schedule of activities and objectives has been embedded in their statement and are summarized in Tables 2 and 3.

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