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Cost of Degree Programs in the University of the Philippines

by

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Abstract

The paper is part of a larger study on normative financing, an alternative scheme to the ad hoc and highly politicised budget allocation process for state universities and colleges (SUC) currently in use. Normative financing requires, among other data, per student cost benchmarks or norms for major program categories by which to set the budget for each SUC. The norms will be derived from cost analyses of programs categorized by field, degree level and quality. The paper estimated the cost of completing each of 33 selected degree programs in the University of the Philippines' four major campuses. They include the fields that each campus specializes in such as electrical engineering in Diliman, agriculture and veterinary medicine in Los Baños, medicine and nursing in Manila and fisheries in Visayas. It applied the curriculum-based methodology developed by the *DLSU–Posadas–Nuqui Researchers*. All undergraduate degree programs in the country contain general education courses offered outside the department in which a student majors. Program cost therefore includes the cost of courses taken in one's department and in other departments. Direct cost of instruction is delineated from indirect cost. Direct cost consists of compensation to faculty assigned to teaching plus supplies and other materials used for instruction. Indirect cost includes administrative cost and various student services. It is noted that in UP, administrative cost is incurred in each layer of its organization - the UP system, the campus and the college. Program cost varies substantially, ranging from P99,000 to P775,000. The variation could be explained by variation in the curricular content, teaching technique and utilization rate. The 7-year medical program expectedly costs more than most other programs; the laboratory-based programs in natural sciences and engineering cost more than the book-based social sciences. Nevertheless, utilization rate appears to be the most significant determinant of program cost. Indirect costs absorb a larger share of program cost than direct costs. The paper proceeded to compare program costs in UP with those in the 6 universities studied by the DLSU researchers. For each field, the cost differed between universities apparently because of variation in quality and utilization rate. Indirect cost was also substantial in the other universities. The paper suggests possibilities for trade-offs of indirect cost for direct cost as a means of improving quality. Finally the paper recommended the adoption of UP's statistical system which provides an adequate basis for cost estimation and analysis.

Key words: Higher education finance, SUCs in the Philippines, cost estimation of education

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Introduction

This paper has two parts - Part I is an estimation and analysis of cost of selected degree programs in the University of the Philippines' four major campuses-- Diliman, Los Baños, Manila and Visayas. Part II integrates the results of the cost estimation of UP degree programs with that of six (6) HEIs undertaken by the *DLSU-Posadas-Nuqui Researchers (DLSUPNR)*. The *DLSUPNR* developed a fairly original framework for estimating the cost of degree programs, say BS Chemistry. The approach is curriculum-based. Note that most undergraduate programs contain courses in the major field as well as what we call general education courses (GE). GE courses generally include mathematics, natural science, social science and history, languages and of course, physical education. In large comprehensive universities, GE courses are provided as service courses by academic units that offer degree programs in their own respective fields. The direct (instructional) cost of a degree program is, therefore, the sum of the direct cost of instruction of each prescribed course taken from all academic units of the university including its own. At the graduate level where, in general, all courses are taken from the major academic unit, the direct cost is that of the major academic unit. This framework is a much more accurate way of estimating the direct cost of a degree program. Earlier studies merely took the per student cost of instruction of an institution or an academic unit. They did not take account of the sharing of cost between academic units.

The study delineates direct cost from indirect cost. Direct cost is the cost of instruction which largely consists of faculty inputs, laboratory and library expenses. Indirect costs include expenditures on administration, student health and security services, general services, sports facilities, etc. They may be viewed as supplemental and not primary inputs in degree programs. It is important to see the absolute level and relative importance of indirect costs as there could be some trade-offs between indirect and instructional inputs. Most of the sampled HEIs spent a relatively large percentage of their budgets on indirect costs, in many cases more than 50% of total cost.

This set of studies provides a new framework and practical methodology for a more rigorous analysis of cost of degree programs. The approach is applied by the *DLSUPNR* to a selected sample of 6 HEIs and by the writer to the 4 largest campuses of the University of the Philippines. The *DLSUPNR* sample includes one high quality private university and five SUCs. The sample HEIs are of varying quality from the best to the less known. The analytical and statistical frameworks developed are recommended for adoption by the country's HEIs particularly the SUCs. Their nationwide application will help identify the more efficient HEIs and programs whose cost can then be used as financing norms. The sample of programs and universities is as yet too small to provide financing norms. Adoption of the estimation and statistical frameworks should not take more than a semester so that financing norms can be derived in a year's time.

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Part I: Estimation and Analysis of Cost of Degree Programs in UP

The University of the Philippines operates loosely as a system of seven (7) constituent universities (CUs) under one Board of Regents and a President.[1] Each CU is headed by a chancellor. There is a division of responsibility between its administrative and academic bodies. Administrative responsibility is shared by the President of the UP System, the chancellors of the CUs and the deans of academic units referred to as colleges/units. The members of the Board of Regents are appointed by the President of the Philippines and include the President of UP as an ex officio member. It is UP's policy-making body. It proposes to the Congress the system's budget which is an integration of the budget proposals from the various CUs. It decides on tuition fee level and structure. It approves the appointment and promotion of faculty, the creation of new programs and the graduation of students as proposed by each CU's university council, its academic authority. The responsibility for academic matters lies principally with the faculty who are granted academic freedom in their teaching assignments and in their membership in the university council. The council, whose membership consists of all professors from assistant professor rank proposes, deliberates on and decides all academic matters including the curriculum of each degree program, the creation of new degree programs and new courses, and any curriculum changes. It decides on admission, performance and graduation criteria, honors to be granted to students; and disciplinary measures against them. Proposals on academic matters originate from the faculty of each CU's academic unit which can be a department, a school, an institute or a college. The CU is headed by a chancellor who has administrative responsibility over academic and non-academic matters. The CU's activities are coordinated with the system mainly through the budget process and the Board's approval of the recommendations of the CU's university councils.

Instruction is the university's primary output. Research and extension (RE) is taken to be a separate output from instruction. We want to highlight the importance of research in the university's academic life. Universities are distinguished from professional schools mainly because of their task to create knowledge through research. Research is essential for faculty growth and for sustaining its quality. Research, however, has not been an important output of the country's HEI system. It has not been given its due value for national development by education and other authorities. Even in UP, RE has been granted relatively small budgets and faculty time. In the cost estimation of UP programs, the expenditures of funds and faculty time on RE are excluded from the calculation of cost of instruction. In the *DLSUPNR*'s estimation, expenditures on RE were taken as part of indirect cost.

The paper concentrated on estimating the cost of instruction at the undergraduate level in UP's more important fields of specialization. The curriculum-based framework for estimating cost developed by the *DLSUPNR* was followed with some modifications intended to simplify the estimation procedure and to account for the budgeting/accounting processes followed by UP.

Each degree program has its own curriculum of prescribed courses and total credits required for graduation. Most bachelor's degree curricula consist of courses in the major or field of specialization, GE or general education courses, cognates and electives. The UP system, through the various CU university councils, has just approved a common GE course set

[1]The autonomous universities are Diliman, the mother or original unit, Los Baños, Visayas, Manila, Open university, Mindanao and Baguio. (They are listed in the chronological order of their institution as CU.) The study covered the first four CUs which are the oldest and largest in the system.

amounting to 42 credits consisting of basic courses in mathematics, natural science, communications or languages, history and other broadening courses. A few substitutions are allowed. Courses in the major field usually comprise the largest share but not necessarily the majority of courses in the curriculum. In the BS Economics degree program, for instance, only 36 out of 132 prescribed credits are economics courses. The program provides for 42 electives aimed at giving students freedom to pursue their own interest and to have a second major. The 5-year BS Mechanical Engineering program, in contrast, prescribes 104 engineering courses and only 6 electives out of 189 total prescribed credits. Engineering programs contain a heavy load of mathematics and physics. It is seen that the cost of a degree program is only partially borne by the academic unit offering the major field since other colleges/units service some courses in its curriculum. The curriculum-based approach requires information on the cost per credit of each course prescribed in a degree program. The *DLSUPNR* piloted its framework for four degree programs, two from a private HEI and two from an SUC. The team estimated the direct cost per credit of each of the courses in the curricula based on the salaries of the instructors of the courses prescribed for each of the four piloted programs. The total direct cost of a degree program is the summation of the credits given to each course multiplied by its per credit cost. Indirect cost was calculated as all other costs including RE divided by enrollment. The formula is as follows:

$$\text{Direct Cost of Degree Program} = \sum_{n=1}^{N} CP_n \times PC_n$$

CP is the cost per credit of course n, PC is the number of prescribed credits of course ***n***. ***n*** are courses from all colleges/units in the university. Indirect cost is added to the direct cost to obtain the total program cost. CP is the salaries of the instructors of course ***n*** divided by the number of students enrolled in it. Indirect costs are all other cost or the university budget-instructors salaries divided by the students enrolled.

The data requirements as reflected in the tables used by the *DLSUPNR* are horrendous.[2] The *DLSUPNR* was forced by budget and time constraints to cut down by 80% the number of degree programs and HEIs that it could tackle. For the study of UP programs we took the average cost per credit of courses offered by each college/academic unit. This amounts to grouping the courses by their college/unit origin, e.g. natural science, social science, languages, etc. In turn, the prescribed courses for a degree program are grouped by college/unit. The direct cost for the program is simply the summation of the number of credits from each college/unit multiplied by its average cost per student credit. The *DLSUPNR* formula for direct cost is revised by changing the subscript **n** from individual courses to college/unit grouping. The grouping of courses by their college/unit origin may not bias the estimation since faculty members are not hired to teach particular courses but a mix of courses. Teaching assignments are usually changed from time to time to afford both students and faculty variety of learning experience. Moreover, faculties share inputs and consult with each other.

In UP, the budget for faculty compensation includes allowances and the 13th month bonus. MOOE for library and laboratory, and administrative and other overhead cost (AOC) are available at the college/unit level and included as part of instructional cost. The share of instruction in faculty load is used to get the share of instruction in faculty compensation and MOOE. The share of research in faculty and MOOE expenses is also based on its share of faculty time.

[2]Cost per credit has to be estimated for as many individual courses as are prescribed in each degree program. For the university as a whole cost per credit has to be estimated for all its courses.

A more detailed estimation of indirect cost was undertaken for the UP program. UP administrative and other overhead costs (AOC) are incurred at three levels of the UP organization - the system, the CUs and the college/unit. The share of instruction in AOC at the college/unit level is included in calculating its cost per credit and treated as part of instructional cost. The UP system administration budget is taken to be the system's AOC. The CUs AOC is the total budget for its administration and support services. The AOC of the system and of each CU are distributed to instruction and RE according to their respective shares in the budget for academic programs. The share of instruction in the AOC for the system is then divided by the number of students in the whole university system and that for the CUs by their corresponding enrollments. The annual total AOC's is multiplied by the number of years for the normal completion of a program. Most undergraduate degree programs last four years, but a few like engineering five years. Cost estimates are made for degree programs that represent major colleges, e.g. electrical engineering in the college of engineering and political science in the college of social sciences and philosophy. The formula will become clearer as we apply it step by step.

The estimation has been facilitated by the statistical system in place. UP has a fairly good reporting of faculty loading, enrollment and budget/expenditures.[3] Each college/unit is asked to fill up a faculty loading form each semester (Appendix A) which contains the course(s) each faculty teaches, the number of students enrolled in each course, the total student credits for each course which is total students enrolled multiplied by the credits assigned to the course, the credits granted to the faculty for research, extension and administration. Faculty on study leave and secondment (special assignment to government or international organization) are also reported. The faculty loading sheet provides its distribution to actual teaching and to each of the other activities. The ratio of teaching credits to total faculty credits is used to allocate the total budget for faculty compensation to instruction.

The university keeps budgetary accounts at the system and CU levels and by line accounts such as personnel services (PS), MOOE and capital outlay. Each CU keeps an internal operating budget with a breakdown for instruction, research, extension and others; the MOOE has separate accounts for supplies and laboratory. The statistical system renders itself to fairly accurate estimation of cost of degree programs and other activities and cost decomposition analysis.

1.1 Estimation of Cost of UP Programs

For each selected degree program in a college/unit, direct and indirect costs were estimated using the formula given below. Direct cost is the cost of faculty time and MOOE for laboratory and library that is directly attributed to instruction. Indirect costs are the administrative and support services originating from the college/unit, the CU and the UP system.

$$\text{Program Cost}_i = \sum_{c=1}^{C} p_c(CSC_{i,c}) + n(AOS_I) + n(AOCU_{I,c})$$

[3] Professor Honesto Nuqui developed the statistical framework for faculty loading and class enrollment.

where i = program *i* in a CU
c = college/unit where a prescribed course originates
p = number of credits required from college *c*
n = number of years to complete program *i*

The variables in the formula are measured as follows:

CSC = cost per student credit
= total cost of instruction (TCI) divided by total student credits (TSC).

TCI = Total cost of instruction = DCI + IDC

DCI = Direct Cost of Instruction = Expenditures for Faculty Personnel Services (FPS) x Faculty Load for Instruction/Total Faculty Load or (FLI/FLT) + Maintenance, Operating and Other Expenses (MOOE) for library and laboratory x ratio of FLI/(FLI+FLRE). Recall research and extension (RE) are taken to be separate outputs of the university.

IDC = Indirect cost of instruction is all other costs of the college or its budget minus DCI and minus the cost of research and extension (RE). The share of RE in FPS is RE share in faculty load multiplied by FPS and the share of RE in MOOE = FLRE/(FLI+FLRE) x MOOE for library and laboratory .

TSC = the weighted sum of student credits of all courses offered by a college. It is the divisor DC and IDC or TCI. Student credits for a course are the number of academic credits assigned to it multiplied by the number of students enrolled in it. Graduate courses are assigned 1.5 the weight of undergraduate courses.

$AOCU_{I,c}$ = Administrative and other overhead cost of each constituent university (CU). This is directly obtained from the internal operating budget of each CU. The budget document gives the budget for the chancellor's office, medical services and other support services, advanced and higher education, research and extension and others. AOCU is simply the CU administrative and the two support services' budget. The share of instruction in AOCU which is the product of AOCU and the ratio of higher education budget to the budget for programs given in the internal operating budgets of the university. $AOCU_I$ is divided by the weighted enrollment of the CU with .75, 1.0 and 1.5 weights given respectively for basic education (elementary and secondary laboratory school, undergraduate and graduate enrollment.

AOS_I = share of instruction per student of the AOS_I is the product of the share of instruction in the budget for programs multiplied by the budget of the Office of the President. AOS_I is divided by the total enrollment of the UP system weighted as above.

Note that $AOCU_I$ and AOS_I are on an annual basis. The two AO_I's are multiplied by the number of years normally required to complete a degree program which is 4 years for most programs; 5 years for engineering, 6 years for dentistry and 7 years for medicine.

The estimate of program cost and its components into direct and indirect costs and the data used for the estimation are given in 5 tables for each CU studied - Diliman, Los Baños, Manila and Visayas. The first number of each table pertains to the campus with Diliman given the number 1, Los Baños, 2, Manila, 3 and Visayas 4. A broad picture of the UP budget is given in Table A. It is discussed before the cost estimates of the four CUs.

1.2 The UP Budget

The university obtains the bulk of its budget from annual congressional appropriation called general appropriation (GA) and from its own earnings called revolving funds (RF). The budget goes through stages, first is allotment, then obligation and finally actual expenditures. The obligated budget is the more credible budget as it has a more assured funding though there could still be some discrepancy between it and actual expenditures. There could be some deviation in expenditures from the budget during the course of the budget year. The only discrepancy between allocated and obligated in budget in 2001 was on capital outlay. An existing position may or may not be filled and not all supplies may be purchased, hence the possible discrepancy between obligated budget and actual expenditure. The internal operating budget (IOB) is allocated by accounting categories - personnel services (PS), maintenance, operation and other expenditures (MOOE) and capital outlay (CO) and by purpose or activities. The activities are classified into administration and support services, medical services and auxiliary services, and programs. The latter include advanced and higher education (instruction), research, extension and others. The budget is on a calendar basis but the school year (SY) is on a June-May basis. Complete data on the budget and expenditures are available for the calendar year 2001 and that on academic matters for the first semester, SY 2000-2001. The allocations are given in Table A.

A total budget of P4.701 Billion was allocated to the UP system in 2001of which 17.8% went to administration and support services, 42.3% to instructional programs (Advanced and HE), 8.0% to research, 4.6% to extension, 24.8% to the Philippine General Hospital (PGH) and 2.5% to others. UP Manila runs the Philippine General Hospital which also functions as the practice hospital of its healthcare and health sciences degree programs. The PGH has absorbed the second largest share of the budget, next only to instruction. Along accounting or line items, PS absorbed 70.7% of the total while MOOE, 26.6% and capital outlay only 2.7%. The university's own earnings amounted to 18% of its total budget a large portion of which were from tuition fees. The table also gives the allocation to the various CUs. As the most comprehensive CU and the largest in terms of faculty and enrollment, Diliman obtained the largest share of the budget, 38.7%, next was Los Baños, 24.3%. The allocation to RE varied with Visayas spending least on it at only 5.4%, Manila 11.5%, Diliman 16.8% and Los Baños 34.0%. Los Baños is the country's research center for agriculture and related fields while Diliman hosts its marine and physical science research institutes.

If we simply take the total UP budget and divide it by enrollment we obtain per student budgets of P84,430 based on gross enrollment and P77,471 based on weighted enrollment. There was variation across the CUs with Los Baños, having the highest budget per student of P76,502 (unweighted) and P72,911 (weighted). The corresponding figures for Manila, excluding PGH were P76,328 and P71,730, Diliman P47,132 and 42,373 and Visayas, P41,349 and P40,700. Taking out the budget for RE reduces the average costs, for the system by about P10,000 or 22.7% of the budget for academic programs. PGH is another responsibility of UP whose budget should definitely be separated from UP academic programs. As we go into the more detailed application of the above formula, we find even greater variation in the average cost levels and their components

across CUs and across programs.

1.3 UP Diliman

Table 1.1 gives the curricula for the 7 selected degree programs in Diliman. The total number of prescribed credits and their composition differ. Among 4-year degree programs, political science and economics prescribe the lowest number of total credits, 135 as compared to business administration 144 and education, 139. The prescribed credits in physical science programs are much higher though there is still some variation among the various specializations. Physics requires total credits of 175, chemistry, 153, biology 150, and computer science only 143. As 5-year programs, the engineering programs have more than 170 prescribed credits including a fairly large number from the College of Sciences. Given everything else equal, the larger the number of prescribed credits, the higher the instructional cost. The composition of prescribed credits would also affect cost to the extent that cost per student credits varies across colleges/units.

Panel B of Table 1.1 gives the estimated total cost of instruction = DC (direct cost) + indirect cost (IDC) of each of the selected programs. The total cost of instruction (TCI) varied substantially across programs. Across 4-year programs total instructional cost ranged from P110,984 for political science to P180,269 for Physics. The TCI for the 5-year engineering programs varied from P177,036 for the mechanical field to P190,226 for the electrical field. Law, a second degree program in which all courses are to be taken in own college had TCI of P353,514. We add to instructional cost administrative and overhead cost of the system and of the CU. For the 4-year programs, the AO costs amounted to P32,712 and for the 5-year programs, P40,900. Of interest here is the ratio of direct cost (DC) to total program cost. Recall that direct instructional cost consisted of the share of teaching in faculty time multiplied by faculty salaries and instruction's share in the college/unit's MOOE for laboratory. Direct cost comprised only a relatively small fraction of the total program cost in most programs, less than 40%, the exception being secondary education, 64% and political science 44%.

The other tables were used for computing the cost of instruction - DC, IDC and the total or TCI. Table 1.2 contains the distribution of faculty load. Full-time faculty load in UP is 12 credit units. Most courses are given 3 credit units but some mathematics and natural science courses which entail laboratory experiments are assigned more credits, usually about 4-5. The faculty may claim credit for research and extension (RE), study leave, sabbatical leave and administrative work. It has been the practice in UP that top administrative positions in the system, CUs and the college are assigned to faculty of senior rank. Rather generous faculty load credits and monetary supplements are granted for administration. Deanship for example is given 6 credits plus P9,000 monthly allowance for representation and honorarium. In fact administration has claimed a fairly large share of faculty load in most colleges, even larger than for RE. The share of instruction in faculty credits averaged 75% and ranged from 62% to 100%, RE averaged 5% and ranged from 0 to 31% while administration averaged 9% and ranged from, 0 to 20%.

Table 1.3 has the estimation of direct, indirect and total cost of instruction by college/unit. Faculty salaries for instruction in column 2 is the product of the ratio of teaching load to total faculty load and faculty salaries and allowances. MOOE for instruction is the product of the ratio of faculty load for instruction to faculty load for instruction and RE (FLI/FLI + FLRE) and the MOOE for laboratory and IT supplies. See the formula above for estimating the cost per student credit. Data on expenditures by college/unit were extracted from each CUs accounting files (Table 1.4). Data on student credits are in Table 1.5 and on faculty load in Table 1.2. It is noteworthy that minimal amount was spent on laboratory and IT supplies as office supplies took the bulk of the MOOE

budget. There has been minimal expenditure for library acquisition as many departments and colleges/units were given less than P100,000 per year for library expenses with the majority given only P60,000. This would buy only from 20 to 30 internationally published reference books.

Table 1.5 contains three sets of enrollment data. The first three columns are for enrollment in the courses offered by each college which were used for calculating student credits. The second set is the equivalent full-time enrollment which is simply the total student credits divided by a normal load of 15 credits per semester. The last set is actual or gross enrollment. The last column gives the ratio of total student credits to total faculty credit load. It is a measure of average class size. The table shows substantial variation in average class size across the colleges/units. For all Diliman colleges/units, the range is from 3 in the College of Music to 30 in the College of Human Kinetic (physical education). Among the programs being studied, the range is from 15 for the College of Science to 25 for the School of Economics.

Tables A has Diliman's obligation budget with a breakdown into administrative and support services, instruction, RE which were used to estimate Diliman's administrative and other overhead cost per student per year (AOU_l).

The result of the estimation process are given in Table 1.1 above. Several factors appear to explain the variation in program cost. First is the variation in curricula as seen in Table 1.1. As mentioned above, the total number of prescribed credits differs with economics and political science requiring only 135 credits and engineering more than 170 prescribed credits. The second explanation is variation in instructional cost per student credits (CSC). It ranges from P713 for the College of Arts and Letter to P1,127 for the College of Engineering. The College of Science had almost the same CSC as the College of Engineering. These higher-cost programs are laboratory-based. The quality of faculty as reflected in their academic background and higher pay may also explain cost variation. The School of Economics which has the highest percentage of faculty with doctoral degree (90%) and possibly the best library in Diliman had as high CSC as the two laboratory-based colleges though it had high class size of 25.

The third and possibly the most important reason for the cost variation is the rate of utilization of instructional inputs as reflected in total student credits (TSC) per faculty teaching credits (average class size). Three colleges/units - College of Science, College of Arts and Letter and College of Social Sciences and Philosophy are the main providers of GE courses. Their introductory or basic courses service the whole undergraduate students of the CU. Statistics and Economics also service a number of colleges as seen in Table 1.1. Service courses are opened depending on demand so they tend to be fully utilized. The relatively large enrollment in these service courses tends to raise their average student credits per faculty load and so lower the direct cost of instruction of the college/unit. There are obviously unpopular programs such as Asian studies and Islamic studies. Music studies, on the other hand, generally require individual coaching, hence the low student credit per faculty load despite a fair enrollment size.

1.4 UP Los Baños

UP Los Baños was originally the College of Agriculture of UP and the first CU to be established (1973) as an autonomous campus. While its program offerings have greatly increased, its identity as the system's agricultural campus has remained. It now operates 11 colleges/units including engineering, environmental sciences, and economics and management. Agriculture is no longer its largest college; its share in total enrollment is 12.9%. The College of Arts and Science is the largest with an enrollment share of 30%. Like the other two smaller campuses (Manila and

Visayas), the College of Arts and Science encompasses all the science and mathematics departments, communications and literature, and the social sciences excepting economics.[4] Program cost was estimated for 8 major fields -biology, computer science, chemical and electrical engineering, sociology, economics, forestry and agriculture. The same formula and variable definitions were used in estimating the direct and indirect cost of instruction, and of the CU administrative and other overhead cost. The data used are in Tables 2.1 to 2.5.

We focus on Table 2.1 which gives the curricula and the program costs of the fields chosen for analysis. Excepting for forestry and agriculture, 6 comparable fields of specialization as in Diliman were selected for the study - biology, computer science, chemical and electrical engineering, economics and sociology (in lieu of political science). The curricula for the first 6 programs do not differ significantly from those in Diliman. Instructional cost was substantially lower than in Diliman for all these fields. The instructional cost of computer science and biology was less than half that in Diliman. Los Baños agriculture and forestry programs had slightly higher cost than its chemical and electrical engineering but the latter's costs were lower than that in Diliman. The relatively high cost of agriculture and forestry is partly explained by their low utilization rate as reflected in their student credit to faculty load ratio - 6 and 7, respectively. Several programs had low ratios - engineering, 9, public affairs, 5, human econology (environmental science) 7 and development communications, 8. Only the College of Science had a high ratio (class size) of 20. While Los Baños' direct cost was lower than at Diliman, its administrative and other overhead cost was higher than at Diliman. This could be due to a higher cost of maintaining and developing its vast tract of forest and agricultural lands. Direct instructional cost comprised less than half of total cost in all fields. Research and extension (RE) was a relatively more important activity in Los Baños particularly in the College of Agriculture and Forestry. (Table A) They are the country's research centers in these fields. RE absorbed 34.0% of the total Los Baños budget as compared to the system's 17.2%, Diliman, 16.8%, Manila, 11.5% and Visayas, 5.4%. The faculty of the College of Agriculture devoted 38% of their time to RE, that of engineering, 18%, forestry, 21%. Note: the cost of RE consists of the budget for RE plus RE's share in faculty time and laboratory supplies which are reported under instructional budget.

1.5 UP Manila

This campus is the System's center for health sciences. Like Los Banos, it started as the College of Medicine and Dentistry of the old UP. It was made an autonomous campus in 1979. Its enrollment in Semester 1 2002 was 5,230 and 5,358 the previous year. It operates 7 colleges in various fields of healthcare and health sciences and one College of Arts and Sciences (CAS). As in Los Baños and Visayas, this college enrolls the largest number of students who major in its degree programs and services the other colleges' prescribed general education (GE) courses. Program cost was estimated for three fields under CAS: computer science, biology and political science, and in health sciences - nursing, dentistry and medicine. The same formula for estimating program cost was followed for the CAS' degree programs and nursing but not for medicine and dentistry. Data on student credits and faculty load are not available for the College of Medicine so its cost per student credit cannot be estimated. Direct cost cannot be calculated for dentistry either because its curriculum includes many medicine courses. UP Manila administration said it experienced difficulty getting the faculty doctors to fill up service forms and other statistical forms. Many of them are quite

[4]Until early 1990's-Diliman also had one College of Arts and Science but its growing size led to its division into three colleges - College of Science that includes mathematics and computer science, the College of Arts and Letters (CAL) and the College of Social Science and Philosophy.

famous and too busy to bother filling up forms. Dentistry and Medicine have similar prescribed GE courses which are scheduled in the first two years. These courses are offered by the College of Arts and Sciences of which we have instructional cost per student credit. The instructional cost of the GE courses are assumed to correspond to the first two years of their curriculum. For subsequent years, we simply took the annual college budget per student, multiply it by the number of years to complete the degree from third year to the year of completion. This period of study is oftentimes referred to as "dentistry proper" or "medicine proper". Dentistry takes six years to complete entailing 4 years "proper" medicine takes 7 years or 5 years "proper". For dentistry, the budget per student year is multiplied by 4 and added to the instructional cost of the prescribed GE courses. For medicine, the college budget per student is multiplied by 5 and added to the instructional cost of the prescribed GE courses. (Table 3.1 for the relevant curricula and program cost.)

The program cost of computer science, biology and political science which are all offered under the College of Arts and Sciences, was lower than in Diliman but higher than Los Baños. Manila's administrative and other overhead cost was comparable to the level of Los Baños and 62% higher than that of Diliman and almost double that of UP Visayas. Possibly Manila's AO is being shared by the PGH. Note that the chancellor of UP Manila has responsibility over its academic programs as well as the administration of PGH. It might be reasonable to assume that only half of Manila's AOCU is attributed to PGH and half to instruction and RE. This assumption would substantially lower UP Manila's program costs.

The program cost of nursing at P153,156 was higher than that of the CAS programs. The cost was comparable to many of the 4-year degree programs in Diliman. The program costs of dentistry and medicine were the highest among all UP programs P334,804 and P772,852, respectively. On an annual basis, the corresponding cost per year in the "proper" stages amounted to P70,842 and P143,968. The comparable figure for the law program was P 98,472.

1.6 UP Visayas

UP Visayas began as a very small department of business administration. It was established in 1975 to be the fishery center of UP. Subsequently it decided to cater to demand for other HE programs. It operates in three neighboring cities - Iloilo, Cebu and Tacloban. Total enrollment was 6,230 in SY 2000-2001 of which 3,322 was in the main campus of Iloilo, 1,502 in Cebu and 1306 in Tacloban. The main campus in Iloilo hosts the College of Fisheries and three other colleges/units - the College of Arts and Sciences (CAS), the College of Management, and the School of Technology and Environmental Sciences. The Cebu and Tacloban campuses each operates as one college/unit, the equivalent of a college of arts and sciences but called UPV Cebu College and UPV Tacloban College. We estimated the program cost of 3 fields in the Iloilo campus, 3 fields also in Cebu and 2 fields in Tacloban. Table 4.1 presents the curriculum, the program cost and its components for the 8 degree programs- fisheries, management and chemical engineering in Iloilo, political science, biology and computer science in Cebu and political science and computer science in Tacloban. Only one instructional cost per student credit was estimated for Cebu and Tacloban.

Fisheries is a high-cost program. Its program cost of P592,686 exceeded all other 4-year programs in the UP system. Its annual cost exceeded that of medicine, P148,795 vs. 143,968. The program has not proved popular with students likely because there is no palpable demand for its graduates. Enrollment in the college was only 205 undergraduate and 56 graduate. The student credits to faculty load ratio averaged only 5. The small class size raised both the direct and indirect

cost of instruction per student credit. Iloilo's engineering program has also attracted relatively few students. Class size averaged only 6. The other programs appear to be operating at full or higher capacity as seen by their high student credit to faculty load ratio - 25 in the College of Arts and Sciences, 29 in UPV Cebu College and 25 in Tacloban College. (Table 4.5). Their program costs were much lower than for fisheries and engineering but higher than the comparable fields in Los Baños and Manila. UPV incurred the lowest administrative and other overhead cost among the 4 CUs despite its far-flung operation in three locations.

It is easy to estimate the program cost of graduate studies since all the courses are to be taken from their own college/unit. Graduate programs in Diliman generally require only about 24 to 30 credits. The cost of masteral degree in economics would be about P55,000, MBA, P46,000, mathematics and computer science P60,000 and electrical engineering P60,000.[5] The short duration of masteral programs, assumed at 1 year, lowers their cost as compared to undergraduate programs.

The observed variation in program costs and their composition into direct and indirect costs within and across the constituent universities raises a number of policy issues. These will be discussed in Part II of the paper where the cost estimates of UP programs are analyzed together with the cost estimates for the six (6) other HEIs undertaken by the DLSUPNR.

[5] Graduate course credits are given a weight of 1.5 of undergraduate credit. The weighted credits are multiplied by the total cost of instruction per student credit to which is added AOCU and AOS. The cost of a masteral degree in economics is approximately 30 x 1.5 x P1,017 instructional cost + AO-CU of P6,548 and AOS of P1,630 or a total annual cost of about P55,000. Graduate programs generally have moderate cost.

Part II: Inter and Intra University Comparison of Program Cost and its Components

Part II of the paper integrates the study of 34 programs in four major UP constituent universities (CUs) and the study on 26 fields in 6 HEIs consisting of 5 SUCs and 1 private university by the *DLSUPNR*. A summary of the resulting estimates of total program cost and direct cost is given in Table C. To facilitate comparison, we grouped the programs by field of specialization, e.g. computer science as offered by the selected universities being studied. We also computed the annual cost to allow their comparison with tuition levels in private HEIs.

There is indeed substantial variation in program cost and its direct and indirect components as measured by the ratio of direct cost to total cost. Cost (P000) varies across universities offering the same program and across programs. Computer science cost from P73.2 in the University of Northern Philippines (UNP) to P178.3 in UP Diliman. The cost in UPLB was 80% lower than Diliman though Los Baños appears to have an equally strong faculty.

The laboratory-based natural science fields had generally higher program cost than computer science in each UP campus. The cost of chemistry program in the only private HEI was much higher than in the other science fields in UP Diliman. Variation in program cost was very wide in engineering ranging from P92.4 in the University of Northern Philippines to P489.8 in UP Visayas; UP Diliman cost was P224.0. Fisheries and medicine were generally high-cost fields. Fisheries in UP Visayas cost P592.7, DMMMSU, P398.9 and Aklan SU, P282.8. Agriculture in UP Los Baños had moderate cost of P203.2 but much higher in DMMMSU at P554.0; Aklan SU incurred only P151.1 and Mariano Marcos State University only P168.7. Education was another program that had large cost variation ranging from P98.5 in Aklan SU to P261.2 in PNU and P597.2 in DMMMSU. In UP Diliman, education's cost was higher than economics, business and political science. Medicine was the most expensive program among all programs in all the sample HEIs, P774.9. The annual cost was higher and the duration of study was longer, 7 years. It appears to have required more expensive laboratory than dentistry which cost only P336.6 or P61.0 annually. Nursing, a very popular field that many students pursue for foreign employment, had a rather moderate cost, P154.3.

Our research did not go rigorously into an analysis of cost variation as it was not its aim. Nevertheless we can already identify the more palpable sources of variation. In the study of UP programs, we find rate of utilization of faculty and other inputs an important reason for the cost variation. There were programs where class size as measured by total student credits per faculty teaching credit was as low as 4. The programs with relatively low cost had class size of 20 or higher. Low utilization of faculty meant low utilization of other fixed inputs. In general, there is a minimum set of inputs - faculty, library, laboratory and administrative and support services that has to be provided for a degree program. The curriculum requires the offering of all prescribed courses, however small their enrollment might be. In the shorter run, most inputs are fixed so that cost per student or per program would decrease as enrollment increases. The program cost of veterinary medicine, forestry, agriculture and engineering in some HEIs was relatively high because of low utilization rate. There are, however, programs like medicine and music that by nature entail high-cost inputs and teaching technique. Many of their courses are faculty-intensive. In medicine, clinical training is undertaken for small groups of students at a time. UP medicine is fully utilized as there is excess demand for the program. Admission into the program is extremely competitive for in recent years it attracted 10 times more applicants than it could admit. It is attractive to many students because of its high reputation and extremely low tuition fees, less than P25,000 per year. Music coaching is done on a one-to-one faculty student basis at a given time. There are also expensive

laboratory supplies that some programs require. A more rigorous analysis of program cost must examine inputs and instructional techniques. A course can be taught in myriad ways. The input mix of laboratory, books, IT packages, class size, among others can be varied to achieve the same rate of learning.

A second important finding is the rather high indirect cost of most of the programs studied, in absolute peso terms and as a proportion of total program cost. The share of direct to total cost was 40% or less in 10 out of 12 programs in UP Diliman, in all UP Los Baños programs, in all UP Manila programs, and in 7 out of 8 UP Visayas programs. There must be room for trading off indirect and direct cost for improving quality of instruction, faculty development and strengthening research and other worthwhile endeavors. Or indirect cost could simply be reduced to lighted the burden of the university on the national coffers. In other words, the budget for administrative staff, supplies and perks could be substituted by or be reallocated to faculty development through graduate studies and modernization of equipment and other purely academic activities. We find meager allocation for laboratory supplies in the MOOE and negligible budgets for library acquisition for colleges in the internal operating budget of the CUs and their colleges. The negligible priority given to library inputs is reflected in its inclusion as the last item in the budget document. This is a strong basis for substituting administrative support for library inputs.

Administrative cost was an important component of UP budget. The explicit AO cost contained in the budget document amounted to 24.5% of the total. This should be adjusted upwards for the substantial faculty time and college MOOE devoted to administration.

In the *DLSUPNR* cases, indirect cost was taken as a residual of the university budget net of direct instructional cost. The team explicitly stated that RE was considered part of indirect cost. This treatment overstates program cost since RE should not be included as indirect cost of instruction. It is definitely a separate output of universities. Indirect cost deserves a closer scrutiny as it absorbed a relatively large fraction of program cost. There is no discernable pattern about the share of indirect cost of the programs. For instance, the share of indirect cost in program cost of fisheries in Aklan SU and DMMMSU was less than 20% as compared to 74.3% in UP Visayas.

2.1 Estimation Framework

The UP study estimated direct cost of instruction from the cost of credits from originating colleges or academic units while the *DLSUPNR* used the cost of credits of individual courses. Direct cost is largely the salaries and allowances of the faculty engaged in teaching. The *DLSUPNR* obtained primary data through a rather difficult and time consuming survey of the teachers of the courses, their salaries, the number of students enrolled in their classes and the time they allocate to research and other activities. The team took the prescribed courses in the curriculum in each year of study and computed the direct cost per year until the degree is completed. This is probably too cumbersome and time-consuming to replicate for the scores if not hundreds of degree programs being offered by large HEIs. In the UP case, the methodology is simplified by taking the average cost per student credit from each academic unit from which the course or courses originate. This reduces the data requirement and the estimation process to the number of academic units or colleges. Moreover, the data used were all secondary data since UP collects all of them. Some are computerized, some are not. UP and its CUs keep a uniform statistical format for the budget, the expenditures, the faculty loading and the classes. Each CU keeps its own file of all these. Some data are computerized and some not. We were not permitted to access the computerized file and

had to depend on hard copies that had to be obtained from separate offices. The computerized files had to be encoded again even if computerized files exist. Data on faculty loading and on classes and their enrollment are not computerized. We had to encode the data from photocopies of the raw forms. On the whole the data being collected are of the form and detail that are most useful for our kind of cost estimation. However, the management of information system is not. In most cases, the data sets are kept in different offices - the budget is under the budget office, the expenditures under the accounting office, the classes and their enrollment under the registrar and the faculty loading under the Vice Chancellor for Academic Affairs Office. In some CUs, raw data on faculty loading and classes had to be collected from individual colleges. The expenditure data, on the other hand, was fairly quickly extracted from the computer files. It took time to obtain the system's budget data. Much time was spent learning where a data set is kept and following up on its release. Cooperation from the various offices differ. UP Los Baños is the happy exception. There was no delay in obtaining all the data for LB seems to have a very efficient centralized computerized information system. It could quickly extract information from its computer files in the format I requested.

The point being made is that the statistics UP collects is of the detail that allows fairly accurate cost estimation. The data format can be easily replicated by HEIs especially the SUCs. What needs improving is the management of information. UP Los Baños management information system appears to be a good model not just for other HEIs but also all of UP's constituent universities.

We provide an estimation process that is easily traced from table to table for each constituent university (CU). It is important to trace the composition of indirect cost which comprised the greater part of the total cost of many programs. The data permits estimating administrative and other overhead cost through the layers of UP administration, from the college to the CU to the system. (Tables A, -.1 to -.5 for each CU) The data allows separation of inputs and expenditures for instruction, RE and other purposes like the running of PGH.

Program cost in the *DLSUPNR* HEIs was overstated by the inclusion of RE in indirect cost. The overstatement can be inferred from the UP estimates by showing the share of RE in program cost. The last row of each panel in Table B gives the rate at which program cost would rise by the inclusion of RE in program cost. In Diliman, RE would add from 18% to 26.6% to program cost in all programs except law; it would increase by only 9.9% since the college of law reported little RE expenditures. In UPLB where research has played an important role, RE would overestimate program cost by more than 100% in half of the cases studied and more than 65.0% in the other cases. The addition was lower in UPV where much less of the budget was given to research. The change for UP Manila was more modest than in Diliman but larger than UPV.

The methodology followed and the information system that has been set up in UP can be easily replicated by other SUCs. The statistical format for the budget, faculty loading, student credits (course offering, credits and number enrolled) is simple and practical and if computerized, readily subject to analysis. The formats are in Appendix 2-5.

2.2 Policy Implications

1. Utilization rate is an important reason for the observed cost variation. In UP Diliman and other HEIs, there are programs that do not attract an economically efficient enrollment level. The concerned HEIs needs to study the reasons and the solution of the problem. Should the programs be closed? Should there be more and more

generous scholarships to attract students especially at the graduate level? Should there be some reallocation of resources from undergraduate instruction to graduate studies and research? Fisheries is a very important field in an island economy like ours, ye it has attracted few students. It can definitely benefit from more research in the field. Increasing support for research would enhance the attractiveness of the field to bright graduate students who will find satisfying work in research.

2. Another approach to underutilization is to concentrate resources on the best SUC offering an important program, say, agriculture in UPLB, fisheries in Iloilo, engineering in Diliman and UPLB, veterinary medicine in Los Banos, etc. There seems to be no good rational for Iloilo to offer chemical engineering or Don Mariano Marcos to continue with its veterinary medicine. Scholarships for students in the uneconomic colleges may substitute for their operation, i.e. close it down and bring their students to a central institution.

3. The presentation of the various curricula is valuable for future cost analysis and for assessing the quality of HEI programs. Computer science in UP has a heavy mathematics content. Is this the case in other HEI's?

4. The *DLSUPNR* framework for estimating the curriculum-based direct cost is very valuable. But it needs to be simplified for ready adoption by HEIs especially the SUCs. The statistics being gathered in UP and the more tractable methodology used for the UP study are recommended for adoption. The disaggregation of program cost into its various components is very valuable for assessing cost effectiveness and planning.

5. It is important to decompose the indirect cost into administrative and support services attributable to instruction and to have a separate accounting of the cost of research. Again the information system of UP permits such disaggregation.

6. In future works, it will be desirable to separate the costing of service or general education (GE) courses from intermediate courses taken by those majoring in the field and the graduate courses. This will increase the degree of accuracy of the cost estimate without unduly adding to the data processing cost. The statistical format could be adjusted to achieve a separate costing for GE or service courses, undergraduate major courses and graduate major courses.

The two studies, UP and the DLSU Team's are pilot studies that suggest a framework for cost estimation, identify data requirements and format and management information system. Needless to say, the frameworks can stand improvements especially for the objective of easy adoption and analytical value.

APPENDIX A

REVISED 2/99

FTES TABLE 4: DEPT FACULTY WORKLOAD (2000)
2000-2001 Sem 1

Dept : ECONOMICS
College: SCHOOL OF ECONOMICS
AU : DILIMAN

A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6
													Average	Average	STUDENT CREDIT UNITS (SCU)			FULLTIME EQUIV STUDENTS (FTES)		
SEQ NO	COLLEGE	DEPT	FULL-TIME EQUIV	FACULTY NAME (FAMILY, GIVEN, M.I.)	FAC RANK	HIGHEST DEGREE	NO. OF CLASSES UG	NO. OF CLASSES Grad	TOTAL	HDCOUNT STUDENTS UG	HDCOUNT STUDENTS Grad	TOTAL	CLASS SIZE UG	CLASS SIZE Grad	SCU UG	SCU Grad	Wtd SCU UG+ 1.5*G	UG FTES	GRAD FTES	W FTES UG+ 1.5*G
				GROUP A1. REGULAR FACULTY (i.e. faculty with their own ITEMS)																
				NOTE: Please list all faculty items -- even for those on leave this semester.																
1	ECON	ECON	1.00	ABRENICA, MARIA JOY V.	Assoc. Prof.	Ph.D.	0	2	2	0	30	30	0	15	0	90	135	0	10	15
2	ECON	ECON	1.00	ALBURO, FLORIAN A.	Professor	Ph.D.	3	0	3	124	0	124	41	0	372	0	372	25	0	25
3	ECON	ECON	1.00	ALONZO, RUPERTO P.	Professor	M.A.	1	1	2	35	30	65	35	30	105	90	240	7	10	22
4	ECON	ECON	1.00	BALISACAN, ARSENIO M.	Professor	Ph.D.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	ECON	ECON	1.00	BAUTISTA, MARIA SOCORRO G.	Professor	Ph.D.	2	0	2	208	0	208	104	0	624	0	624	42	0	42
6	ECON	ECON	1.00	CANLAS, DANTE B.	Professor	Ph.D.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	ECON	ECON	1.00	CAPUNO, JOSEPH J.	Asst. Prof.	Ph.D.	1	1	2	39	32	71	39	32	117	96	261	8	11	24
8	ECON	ECON	1.00	CARLOS, FIDELINA N.	Professor	Ph.D.	2	0	2	61	0	61	31	0	244	0	244	16	0	16
9	ECON	ECON	1.00	CLARETE, RAMON L.	Professor	Ph.D.	1	1	2	43	10	53	43	10	129	30	174	9	3	14
10	ECON	ECON	1.00	DANAO, ROLANDO A.	Professor	Ph.D.	1.5	1	2.5	50	26	76	33	26	150	78	267	10	9	23
11	ECON	ECON	1.00	DE DIOS, EMMANUEL S.	Professor	Ph.D.	1	1	2	375	22	397	375	22	1,125	66	1,224	75	7	86
12	ECON	ECON	1.00	DIOKNO, BENJAMIN E.	Professor	Ph.D.	3	0	3	122	0	122	41	0	366	0	366	24	0	24
13	ECON	ECON	1.00	ESGUERRA, EMMANUEL F.	Assoc. Prof.	Ph.D.	1	1	2	37	30	67	37	30	111	90	246	7	10	22
14	ECON	ECON	1.00	FABELLA, RAUL V.	Professor	Ph.D.	0	1	1	0	10	10	0	10	0	30	45	0	3	5
15	ECON	ECON	1.00	HERRIN, ALEJANDRO N.	Professor	Ph.D.	0	2	2	0	34	34	0	17	0	102	153	0	11	17
16	ECON	ECON	1.00	KIM, YOUNGDUK	Asst. Prof.	Ph.D.	0	2	2	0	15	15	0	8	0	45	68	0	5	8
17	ECON	ECON	1.00	LIM, JOSEPH Y.	Professor	Ph.D.	1	1	2	10	24	34	10	24	30	72	138	2	8	14
18	ECON	ECON	1.00	MEDALLA, FELIPE	Professor	Ph.D.	0	2	2	0	30	30	0	15	0	90	135	0	10	15
19	ECON	ECON	1.00	MENDOZA, MARIA NIMFA	Asst. Prof.	Ph.D.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	ECON	ECON	1.00	NAVARRO, SUSAN	Asst. Prof.	M.A.	2	0	2	35	0	35	18	0	140	0	140	9	0	9
21	ECON	ECON	1.00	PADERANGA, CAYETANO, JR. W.	Professor	Ph.D.	1	1	2	267	25	292	267	25	801	75	914	53	8	66
22	ECON	ECON	1.00	QUIMBO, STELLA A.	Asst. Prof.	Ph.D.	3	0	3	104	0	104	35	0	312	0	312	21	0	21
23	ECON	ECON	1.00	RESIDE, RENATO JR. E.	Asst. Prof.	Ph.D.	1	1	2	17	21	38	17	21	51	63	146	3	7	14
24	ECON	ECON	1.00	SICAT, GERARDO	Professor	Ph.D.	1	1	2	189	0	189	189	0	567	0	567	38	0	38
25	ECON	ECON	1.00	SOLON, ORVILLE C.	Assoc. Prof.	Ph.D.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	ECON	ECON	1.00	TECSON, GWENDOLYN R.	Professor	Ph.D.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	ECON	ECON	26.00	SUBTOTAL (Group A1)			26	19	45	1,716	339	2,055	67	18	5,244	1,017	6,770	350	113	519
	ECON	ECON		% DISTRIBUTION (A1)																
	ECON	ECON		AVG per A1 FTE FAC ITEM			1.0	0.7	1.7	66	13	79	67	18	202	39	260	13	4	20
				GROUP A2: SUBSTITUTES (who draw salary from the item) of a regular faculty on leave without pay.																
				NOTE: In this context, a "substitute" is the one who draws salary from the item of a regular faculty on some leave without pay.																
				If for some reason, it is a TA/TF whose salary is charged against the item, then the TA/TF should be considered a "substitute".																
1									0			0	0	0	0	0	0	0	0	0
2									0			0	0	0	0	0	0	0	0	0
3									0			0	0	0	0	0	0	0	0	0
0	ECON	ECON	0.00	SUBTOTAL (Group A2)			0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ECON	ECON		% DIST'N OF UNITS (A1 + A2)																
26	ECON	ECON	26.00	TOTAL (A1 + A2)			26	19	45	1,716	339	2,055	67	18	5,244	1,017	6,770	350	113	519
	ECON	ECON		AVG per FTE FAC ITEM									0	0						

GROUP B: Faculty members with "VIRTUAL ITEMS", e.g. LUMP SUM, PS SAVINGS, etc.

APPENDIX A

FTES TABLE 4
FOR A DEPARTMENT

E1	E2	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	G1	H1	H2	H3	H4
	DISTRIBUTION OF UNITS TO VARIOUS FACULTY ACTIVITIES																
TEACH'G with CLM	TEACH'G w / o CLM or UNITS TO STUDENT	RES	SABB	EXTN	PAID STUDY LOAD	UNPAID STUDY LOAD	ALC INSIDE COLL	ALC OUTSIDE COLL	SERVICE FOR OPEN U	OTHERS	TOTAL LOAD w/ CLM	TOTAL LOAD w/o CLM	UNUSED UNITS	REMARKS	RECEIVING SALARY FROM FACULTY ITEM?	ENTITLED TO FULL LV from TEACHING?	FOR THOSE ON LEAVE: FULL NAME OF SUBSTITUTE OR "NO SUB" DO NOT LEAVE BLANK.
9.00	9.0	3									12.0	12.0					
9.41	9.0	3									12.4	12.0					
7.50	9.0	3									10.5	12.0					
0.00	0.0	0								Leave w/o pay	0.0	0.0					
6.00	6.0	3					3			Dept. Chairman	12.0	12.0					
0.00	0.00	0								NEDA Dir. Gen.	0.0	0.0					
7.50	7.5	3					1.5			H.E.P. Director	12.0	12.0					
8.00	8.0	3					3			Vice-Chairman & Dir.Undergrad Adm.	14.0	14.0					
7.50	7.5	3									10.5	10.5					
9.00	9.0	3									12.0	12.0					
9.00	9.0	3									12.0	12.0					
9.00	9.0	3									12.0	12.0					
7.50	7.5	3					3			Director for Research	13.5	13.5					
4.50	4.5	3					6			Dean	13.5	13.5					
9.00	9.0	3									12.0	12.0					
9.00	9.0	1										10.0					
7.50	7.5	3					1.5			Finance Director	12.0	12.0					
9.00	9.0	3									12.0	12.0					
0.00	0.0	0								Res. leave w/o pay	0.0	0.0					
8.00	8.0	3									11.0	11.0					
9.00	9.0	3									12.0	12.0					
11.00	11.0	3					1.5			Dep. Dir. for Research	15.5	15.5					
7.50	7.5	3					4.5			College Secretary	15.0	15.0					
9.00	9.0	3									12.0	12.0					
0.00	0.0	12								Sabbatical w/pay	12.0	12.0					
0.00	0.0	12								Sabbatical w/pay	12.0	12.0					
172.91	174	85	0	0	0	0	24	0	0	0	271.91	283	0	SUBTOTAL (Group A1)			
64%	64%	31%	0%	0%	0%	0%	9%	0%	0%	0%	100%	104%		% DISTRIBUTION (A1)			
6.7	6.7										10.5	10.9		AVG per A1 FTE FAC ITEM			
															PAID FROM ITEM?		
														SUB FOR WHOM?			
0.0	0.0										0.0	0.0					
0.0	0.0										0.0	0.0					
0.0	0.0										0.0	0.0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	SUBTOTAL (Group A2)			
															0		
64%	64%	31%	0%	0%	0%	0%	9%	0%	0%	0%	100%	104%	0%	% DIST'N OF UNITS (A1 + A2)			
173	174	85	0	0	0	0	24	0	0	0	272	283	0	TOTAL (A1 + A2)			
6.7	6.7										10.5	10.9		AVG per FTE FAC ITEM			

APPENDIX A

NOTE: Faculty members(not listed above) with salaries charged against a lump sum (e.g. Faculty Devt Fund) or general "PS Savings".

									0										
1									0			0	0	0	0	0	0	0	0
2									0			0	0	0	0	0	0	0	0
0	ECON	ECON	0.00	SUBTOTAL (Group B)			0	0	0	0	0	0	0	0	0	0	0	0	0

GROUP C. TEACHING ASSISTANTS / TEACHING FELLOWS

1	ECON	ECON	1.00	AZURIN, PAOLO	TF	B	3		3	90	0	90	30	0	270	0	270	18	0	18
2	ECON	ECON	1.00	RAMOS, CHERRY	TF	B	3		3	39	0	39	13	0	117	0	117	8	0	8
3	ECON	ECON	1.00	RADOC, BENJAMIN	TF	B	3		3	75	0	75	25	0	225	0	225	15	0	15
4	ECON	ECON	1.00	MILAMBILING, PORTIA	TF	B	3		3	50	0	50	17	0	150	0	150	10	0	10
5	ECON	ECON	1.00	CASTILLEJOS, CINDY	TF	B	3		3	103	0	103	34	0	309	0	309	21	0	21
6	ECON	ECON	1.00	OLIVA, MARITESS	TF	B	3		3	100	0	100	33	0	300	0	300	20	0	20
7	ECON	ECON	1.00	GLINDRO, ELOISA	TF	B	3		3	96	0	96	32	0	288	0	288	19	0	19
8	ECON	ECON	1.00	MANLAGNIT, CIELO	TF	B	3		3	88	0	88	29	0	264	0	264	18	0	18
9	ECON	ECON	1.00	ABAJON, MHELVIN	TF	B	3		3	65	0	65	22	0	195	0	195	13	0	13
10	ECON	ECON	1.00	BALUGA, ANTHONY	TF	B	2		2	46	0	46	23	0	138	0	138	9	0	9
10	ECON	ECON	10.00	SUB TOTAL (GROUP C)			29	0	29	752	0	752	26	0	2,256	0	2,256	150	0	150

GROUP D. RESEARCH OR EXTENSION STAFF WHO HOLD REGULAR FACULTY RANKS

NOTE: Please list even those without teaching loads this semester.

1									0				0	0	0	0	0	0	0	0
2									0				0	0	0	0	0	0	0	0
2	ECON	ECON	0.00	SUB TOTAL (GROUP D)			0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ECON	ECON		% DIST'N OF UNITS (ALL RES'L FAC)																
38	ECON	ECON	36.0	TOTAL (ALL RES'L FAC)			55	19	74	2,468	339	2,807	45	18	7,500	1,017	9,026	500	113	670
	ECON	ECON		AVG per RES'L FTE FACULTY													251	14	3	19

GROUP E. NON-RESIDENTIAL FACULTY (e.g. Lecturers, Professors Emeriti, other retired U.P. faculty, Affiliate/ "Crossover" Faculty from other Depts/Colleges, etc.

1	ECON	ECON	1.00	NAVARRO, ADORA	Sr. Lect.	M.A.	1	0	1	40	0	40	40	0	120	0	120	8	0	8
2	ECON	ECON	1.00	FERRER, RICARDO D.	Prof. Lect	M.A.	1	0	1	40	0	40	40	0	120	0	120	8	0	8
3	ECON	ECON	1.00	LEDESMA, CHARLES C.	Lect.	M.A.	1	0	1	42	0	42	42	0	126	0	126	8	0	8
4	ECON	ECON	1.00	BRIONES, ROEHLANO	Prof. Lect	Ph.D.	2	0	2	55	0	55	28	0	165	0	165	11	0	11
5	ECON	ECON	1.00	TAN, ELIZABETH S.	Sr. Lect.	M.A.	1	0	1	13	0	13	13	0	39	0	39	3	0	3
6	ECON	ECON	1.00	CORPUZ, CATHERINE FRANCES J.	Sr. Lect.	M.A.	1	0	1	47	0	47	47	0	141	0	141	9	0	9
7	ECON	ECON	1.00	PRENIO, JERMY	Lect.	M.A.	1	0	1	44	0	44	44	0	132	0	132	9	0	9
8	ECON	ECON	1.00	BAUTISTA, CARLOS	Prof. Lect	Ph.D.	0	1	1	0	13	13	0	13	0	39	59	0	4	7
9	ECON	ECON	1.00	TAN, EDITA A.	Prof. Lect	Ph.D.	1	0	1	18	0	18	18	0	54	0	54	4	0	4
9	ECON	ECON	9.00	SUBTOTAL (NON-RES'L)			9	1	10	299	13	312	33	13	897	39	956	60	4	66
													0	0						
	ECON	ECON		AVERAGE PER NON-RES'L FAC						33	1	35	0	0				7	0	7
	ECON	ECON		% Dist'n of units (DEPT)																
47	ECON	ECON	45.0	DEPT TOTAL			64	20	84	2,767	352	3,119	44	18	8,397	1,056	9,981	560	117	736
	ECON	ECON		AVG per FTE FACULTY													222	12	3	16

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APPENDIX A

														SOURCE OF SALARY
0.0	0.0										0.0	0.0		
0.0	0.0					0					0.0	0.0		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	SUBTOTAL (Group B)
														0
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
2.0	2.0										2.0	2.0		
9	9	0	0	0	0	0	0	0	0	0	29	29	0	SUB TOTAL (GROUP C)
0.0	0.0										0.0	0.0		
0.0	0.0										0.0	0.0		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	SUB TOTAL (GROUP D)
60%	61%	28%	0%	0%	0%	0%	8%	0%	0%	0%	100%	104%	0%	% DIST'N OF UNITS (ALL RES'L FAC)
182	183	85	0	0	0	0	24	0	0	0	301	312	0	TOTAL (ALL RES'L FAC)
5.1	5.1			0							8.4	9		AVG per RES'L FTE FACULTY
														CROSSOVER FROM
3.0	3.0										3.0	3.0		
3.0	3.0										3.0	3.0		
3.05	3.0										3.1	3.0		
6.0	6.0										6.0	6.0		
3.0	3.0										3.0	3.0		
3.13	3.0										3.1	3.0		
3.10	3.0										3.1	3.0		
4.50	4.5										4.5	4.5		
3.0	3.0										3.0	3.0		
31.78	32	0	0	0	0	0	0	0	0	0	31.78	32	0	SUBTOTAL (NON-RES'L)
3.5	3.5										3.5	3.5		AVERAGE PER NON-RES'L FAC
64%	64%	26%	0%	0%	0%	0%	7%	0%	0%	0%	100%	103%	0%	% Dist'n of units (DEPT)
214	215	85	0	0	0	0	24	0	0	0	333	344	0	DEPT TOTAL
4.7	4.8			0							7.4	8		AVG per FTE FACULTY

TABLE 1.1
CURRICULUM AND TOTAL COST FOR SELECTED ACADEMIC PROGRAMS
UNIVERSITY OF THE PHILIPPINES - DILIMAN

College / Academic Unit of Program	Instructional Cost per Student Credit		SELECTED ACADEMIC DEGREE PROGRAMS											
	Total Cost	Direct Cost	Chemistry	Physics	Biology	Computer Science	Chemical Engineering	Mechanical Engineering	Electrical Engineering	Political Science	Economics	Business Administration	Secondary Education	Law
Sciences:	1,100	472	120	142	114	50	62	44	40	18	18	21	12	
General (Introduction)			3			6	3	3	3	6	6	6	6	
Math			18	19	15	33	18	18	21	9	9	12	3	
Chemistry			**68**	10	20		23	5	5					
Physics			15	**93**	10	8	15	15	8					
Biology			10	10	**63**									
STS			3	3	3	3	3	3	3	3	3	3	3	
Other			3	7	3									
Arts & Letters:	713	485	15	15	15	15	15	15	15	30	15	15	15	
English/Filipino										18				
Other (Spanish)										12				
Engineering:	1,127	536				54	71	88	106					
Major							**50**	**58**	**80**					
Engineering Science							17	23	17					
Electrical Engineering						6	4	7						
Computer Science						**48**			9					
Social Sciences	743	437	18	18	21	18	18	18	18	18	18	18	18	
Major										**45**			**88**	**133**
Economics	1,017	423								12	**36**	6		
Business Administration	850	364									3	**72**		
Statistics	739	423									3	3		
Electives	898	449				6	12	6	3	12	42	9	6	
TOTAL UNITS			**153**	**175**	**150**	**143**	**178**	**171**	**182**	**135**	**135**	**144**	**139**	**133**
Total Cost per Student Credit			*1,100*	*1,100*	*1,100*	*1,127*	*1,127*	*1,127*	*1,127*	*743*	*1,017*	*850*	*1,255*	*2,658*
Direct Cost per Student Credit			*472*	*472*	*472*	*536*	*536*	*536*	*536*	*485*	*423*	*364*	*1,078*	*426*
Total Instructional Cost			156,069	180,269	151,698	145,318	183,067	177,036	190,226	110,984	122,982	124,774	153,100	353,514
Direct Instructional Cost			71,781	82,165	70,260	70,376	87,844	85,768	92,183	63,196	60,066	59,105	118,360	56,658
UPD Admin Overhead Cost	6,548		26,192	26,192	26,192	26,192	32,740	32,740	32,740	26,192	26,192	26,192	26,192	26,192
Central Admin Overhead Cos	1,630		6,520	6,520	6,520	6,520	8,150	8,150	8,150	6,520	6,520	6,520	6,520	6,520
TOTAL PROGRAM COST			**188,781**	**212,981**	**184,410**	**178,030**	**223,957**	**217,926**	**231,116**	**143,696**	**155,694**	**157,486**	**185,812**	**386,226**
Ratio: Direct Cost / Total Program Cost			*0.38*	*0.39*	*0.38*	*0.40*	*0.39*	*0.39*	*0.40*	*0.44*	*0.39*	*0.38*	*0.64*	*0.15*

TABLE 1.2
FACULTY LOADING and DISTRIBUTION OF UNITS TO VARIOUS FACULTY ACTIVITIES
UNIVERSITY OF THE PHILIPPINES - DILIMAN
A.Y. 2000-2001 & A.Y. 2001-2002 (First Semester Only)

COLLEGE	Distribution of Units to Various Faculty Activities					
	Teaching	Research	Extension	Administrative	Others	Total Load
COLLEGE OF SCIENCE	1,875	463	3	270	445	3,056
CAL	2,380	3	3	203	350	2,939
CSSP	1,994	99	0	243	363	2,698
COLL OF ENGINEERING	1,165	71	35	147	237	1,655
COLL OF EDUCATION	726	3	0	90	36	855
ASIAN INST OF TOURISM	110	3	0	24	15	152
COLL OF ARCHITECTURE	266	0	0	24	0	290
ASIAN CENTER	146	24	6	26	-14	188
COLLEGE OF BUS ADM	327	6	0	108	83	524
CSWCD	345	19	6	39	45	454
SCHOOL OF ECONOMICS	173	85	0	24	-10	272
COLLEGE OF FINE ARTS	191	0	0	32	11	234
COLL OF HOME ECONOMICS	635	27	0	62	102	826
COLL OF HUMAN KENETICS	354	0	0	42	57	453
INST OF ISLAMIC STUDIES	31	0	0	0	0	31
COLLEGE OF LAW	178	0	0	45	0	223
INST OF LIBRARY SCIENCE	74	3	0	11	12	100
COLLEGE OF MASS COM	405	6	0	60	33	504
COLLEGE OF MUSIC	782	0	0	45	59	886
NCPAG	210	18	0	44	15	286
SOLAIR	197	0	0	15	0	212
S U R P	126	12	0	24	6	168
SCHOOL OF STATISTICS	243	0	0	26	42	311
TMC	13	0	0	0	0	13
ASP	0	0	0	0	12	12
TOTAL	**12,945**	**842**	**53**	**1,602**	**1,899**	**17,341**

COLLEGE	Distribution of Units to Various Faculty Activities (in percent)						%	%
	Teaching	Research	Extension	Administrative	Others	Total Load	$FL_I / (FL_I + FL_{RE})$	$FL_{RE} / (FL_I + FL_{RE})$
COLLEGE OF SCIENCE	61	15	0	9	15	100	80	20
CAL	81	0	0	7	12	100	100	0
CSSP	74	4	0	9	13	100	95	5
COLL OF ENGINEERING	70	4	2	9	14	100	92	8
COLL OF EDUCATION	85	0	0	11	4	100	100	0
ASIAN INST OF TOURISM	72	2	0	16	10	100	97	3
COLL OF ARCHITECTURE	92	0	0	8	0	100	100	0
ASIAN CENTER	78	13	3	14	-7	100	83	17
COLLEGE OF BUS ADM	62	1	0	21	16	100	98	2
CSWCD	76	4	1	9	10	100	93	7
SCHOOL OF ECONOMICS	64	31	0	9	-4	100	67	33
COLLEGE OF FINE ARTS	82	0	0	13	5	100	100	0
COLL OF HOME ECONOMICS	77	3	0	8	12	100	96	4
COLL OF HUMAN KENETICS	78	0	0	9	13	100	100	0
INST OF ISLAMIC STUDIES	100	0	0	0	0	100	100	0
COLLEGE OF LAW	80	0	0	20	0	100	100	0
INST OF LIBRARY SCIENCE	74	3	0	11	12	100	96	4
COLLEGE OF MASS COM	80	1	0	12	7	100	99	1
COLLEGE OF MUSIC	88	0	0	5	7	100	100	0
NCPAG	73	6	0	15	5	100	92	8
SOLAIR	93	0	0	7	0	100	100	0
S U R P	75	7	0	14	4	100	91	9
SCHOOL OF STATISTICS	78	0	0	8	13	100	100	0
TMC								
ASP								
TOTAL	**75**	**5**	**0**	**9**	**11**	**100**	**94**	**6**

Note: Faculty includes only those regular faculty and substitutes. The data includes only the first semester of AY 2000-2001 & AY 2001-2002

Source: UPD Budget Office

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TABLE 1.3
TOTAL COST OF INSTRUCTION PER STUDENT CREDIT
UNIVERSITY OF THE PHILIPPINES - DILIMAN
CY 2001

COLLEGE	DIRECT COST OF INSTRUCTION			INDIRECT COST OF INSTRUCTION			TOTAL	OPERATING COST PER STUDENT CREDIT				
	PS_I	$MOOE_I$	TOTAL	PS_{OTHERS}	$MOOE_{OTHERS}$	TOTAL	COST	DC / SCU		IC / SCU		TC / SCU
COLLEGE OF SCIENCE	39,968,437	2,427,242	42,395,680	53,839,397	2,661,943	56,501,340	98,897,020	472	43%	629	57%	1,100
CAL	45,816,123	263,401	46,079,524	18,610,352	3,017,076	21,627,429	67,706,953	485	68%	228	32%	713
CSSP	39,371,232	424,641	39,795,873	25,444,693	2,391,393	27,836,086	67,631,959	437	59%	306	41%	743
COLL OF ENGINEERING	27,127,944	1,477,457	28,605,401	25,296,001	6,236,853	31,532,855	60,138,256	536	48%	591	52%	1,127
COLL OF EDUCATION	35,396,394	109,556	35,505,950	17,646,403	682,286	18,328,689	53,834,639	1,078	66%	557	34%	1,635
ASIAN INST OF TOURISM	2,250,074	11,588	2,261,662	6,197,991	255,259	6,453,249	8,714,912	326	26%	929	74%	1,255
COLL OF ARCHITECTURE	6,303,284	26,592	6,329,876	2,891,132	326,549	3,217,681	9,547,557	606	66%	308	34%	915
ASIAN CENTER	4,495,695	48,521	4,544,217	4,248,846	179,534	4,428,379	8,972,596	2,158	51%	2,103	49%	4,260
COLLEGE OF BUS ADM	8,430,137	89,358	8,519,495	10,578,319	781,186	11,359,505	19,879,000	364	43%	486	57%	850
CSWCD	7,613,097	54,536	7,667,633	6,077,266	647,280	6,724,546	14,392,179	719	53%	630	47%	1,349
SCHOOL OF ECONOMICS	5,692,454	32,442	5,724,896	7,364,921	676,961	8,041,883	13,766,778	423	42%	594	58%	1,017
COLLEGE OF FINE ARTS	6,302,080	5,300	6,307,380	3,503,777	1,017,432	4,521,208	10,828,588	751	58%	538	42%	1,289
COLL OF HOME ECONOMICS	12,691,440	70,760	12,762,200	14,189,802	838,327	15,028,129	27,790,329	505	46%	595	54%	1,100
COLL OF HUMAN KENETICS	6,322,205	90,168	6,412,373	5,564,499	479,681	6,044,181	12,456,554	235	51%	221	49%	456
INST OF ISLAMIC STUDIES	1,915,239	1,575	1,916,814	1,491,219	63,953	1,555,173	3,471,987	4,840	55%	3,927	45%	8,768
COLLEGE OF LAW	4,557,059	4,850	4,561,909	23,449,178	473,974	23,923,152	28,485,060	426	16%	2,232	84%	2,658
INST OF LIBRARY SCIENCE	1,788,128	23,924	1,812,052	1,422,181	95,995	1,518,177	3,330,229	519	54%	435	46%	954
COLLEGE OF MASS COM	9,134,448	98,880	9,233,328	7,126,332	639,322	7,765,654	16,998,982	577	54%	486	46%	1,063
COLLEGE OF MUSIC	10,606,561	20,695	10,627,256	3,920,817	303,699	4,224,516	14,851,772	2,125	72%	845	28%	2,970
NCPAG	6,605,307	24,382	6,629,688	16,063,701	452,710	16,516,411	23,146,099	767	29%	1,910	71%	2,677
SOLAIR	3,753,960	6,436	3,760,395	4,176,325	335,520	4,511,845	8,272,240	720	45%	864	55%	1,585
S U R P	4,653,742	11,439	4,665,181	4,879,104	114,222	4,993,326	9,658,508	1,462	48%	1,564	52%	3,026
SCHOOL OF STATISTICS	4,852,219	37,620	4,889,839	3,228,462	419,661	3,648,124	8,537,963	423	57%	316	43%	739
TMC												
ASP												
TOTAL	**295,647,260**	**5,361,363**	**301,008,623**	**267,210,720**	**23,090,816**	**290,301,536**	**591,310,159**	**20,956**		**21,295**		**42,251**

Formula:

$PS_I = PS_{Faculty} \times (FL_I / TFL)$

$MOOE_I = (Lab+Lib) \times (FL_I / (FL_I+FL_{RE}))$

$PS_{RE} = PS_{Faculty} \times (FL_{RE} / TFL)$

$MOOE_{RE} = (Lab + Lib) \times (FL_{RE} / (FL_I+FL_{RE})))$

$PS_{OTHERS} = PS_{TOTAL} - PS_I - PS_{RE}$

$MOOE_{OTHERS} = MOOE_{TOTAL} - MOOE_I - MOOE_{RE}$

(Lab+Lib) = IT Supplies and Laboratory Supplies

Direct Cost of Instruction = $PS_I + MOOE_I$

Indirect Cost of Instruction = $PS_{OTHERS} + MOOE_{OTHERS}$

Total Cost = Direct Cost + Indirect Cost

Source: UPD Accounting Office

TABLE 1.4
COLLEGE EXPENDITURES ON PERSONAL SERVICES AND MAINTENANCE AND OTHER OPERATING EXPENSES
UNIVERSITY OF THE PHILIPPINES - DILIMAN
CY 2001

COLLEGE	PERSONAL SERVICES (PS)			MAINTENANCE AND OTHER OPERATING EXPENSE (MOOE)						Current Operating Expenditure
	Faculty*	Others	TOTAL	Office Supplies	IT Supplies	Laboratory Supplies	Travel	Others	TOTAL	
COLLEGE OF SCIENCE	65,130,687	38,609,895	103,740,582	2,330,274	920,029	2,110,419	331,669		5,692,391	109,432,973
CAL	56,576,685	7,965,289	64,541,974	1,023,326	264,065		33,945	1,959,806	3,281,141	67,823,115
CSSP	53,291,182	13,479,875	66,771,058	536,567	445,728		132,298	1,722,527	2,837,121	69,608,179
COLL OF ENGINEERING	38,533,880	16,357,724	54,891,604	2,043,697	1,611,852		37,092	4,156,064	7,848,705	62,740,309
COLL OF EDUCATION	41,686,443	11,502,635	53,189,078	184,034	110,008		8,664	489,588	792,294	53,981,372
ASIAN INST OF TOURISM	3,108,413	5,400,962	8,509,375	22,226	11,904		4,978	228,055	267,163	8,776,537
COLL OF ARCHITECTURE	6,872,002	2,322,415	9,194,417	35,898	26,592			290,651	353,141	9,547,557
ASIAN CENTER	5,793,422	3,878,067	9,671,489	59,680	58,526		14,060	105,794	238,059	9,909,548
COLLEGE OF BUS ADM	13,505,069	5,657,969	19,163,038	196,295	90,997		11,664	573,228	872,183	20,035,221
CSWCD	10,018,395	4,223,642	14,242,037	77,626	58,488		41,405	528,249	705,768	14,947,805
SCHOOL OF ECONOMICS	8,951,681	6,904,021	15,855,702	205,181	48,390			471,781	725,351	16,581,053
COLLEGE OF FINE ARTS	7,708,765	2,097,092	9,805,857	59,956	5,300		2,298	955,178	1,022,732	10,828,588
COLL OF HOME ECONOMICS	16,507,062	10,913,560	27,420,623	261,205	63,767	10,000	7,844	569,278	912,094	28,332,717
COLL OF HUMAN KENETICS	8,092,279	3,794,425	11,886,704	80,620	90,168		2,414	396,648	569,850	12,456,554
INST OF ISLAMIC STUDIES	1,915,239	1,491,219	3,406,458	33,455	1,575		2,981	27,517	65,528	3,471,987
COLLEGE OF LAW	5,709,124	22,297,112	28,006,237	9,685	4,850		1,692	462,598	478,824	28,485,060
INST OF LIBRARY SCIENCE	2,401,820	880,689	3,282,509	49,532	24,890		178	46,286	120,885	3,403,394
COLLEGE OF MASS COM	11,367,313	5,028,792	16,396,105	178,121	100,345		7,998	453,203	739,667	17,135,772
COLLEGE OF MUSIC	12,017,152	2,510,226	14,527,378	103,735	20,695		2,245	197,719	324,394	14,851,772
NCPAG	9,015,772	14,220,403	23,236,176	56,447	26,476		3,744	392,520	479,186	23,715,361
SOLAIR	4,040,521	3,889,763	7,930,285	89,484	6,436		27,869	218,167	341,956	8,272,240
S U R P	6,207,456	3,769,309	9,976,765	34,663	12,530		511	79,048	126,752	10,103,517
SCHOOL OF STATISTICS	6,208,200	1,872,481	8,080,681	95,186	37,620			324,475	457,281	8,537,963
TMC										
ASP										
GRAND TOTAL	***394,658,561***	***189,067,567***	***583,726,128***	***7,766,893***	***4,041,230***	***2,120,419***	***675,545***	***14,648,378***	***29,252,464***	***612,978,592***

Note:

PS data was extracted from the computerized accounting payroll database of UPD Accounting Office.

*Includes only the Basic Salary of the Faculty

Source: UPD Accounting Office

TABLE 1.5
STUDENT CREDIT UNITS, ENROLLMENT and STUDENT CREDIT PER TOTAL FACULTY LOAD
UNIVERSITY OF THE PHILIPPINES - DILIMAN
A.Y. 2000-2001 & A.Y. 2001-2002 (First Semesters Only)

COLLEGE	Student Credit Units (SCUs)			Fulltime Equivalent Students (FTES)			Enrollment			Student Credit per Total Faculty Load
	UG	Grad	Weighted	UG	Grad	Weighted	UG	Grad	Total	
COLLEGE OF SCIENCE	41,895	2,161	44,933	2,792	239	3,147	1,520	762	2,282	15
CAL	46,023	978	47,490	3,069	108	3,231	1,386	352	1,738	16
CSSP	41,850	2,424	45,486	2,790	270	3,194	1,972	632	2,604	17
COLL OF ENGINEERING	22,871	2,535	26,674	1,524	281	1,946	4,440	648	5,088	16
COLL OF EDUCATION	6,027	6,959	16,466	402	613	1,322	723	1,592	2,315	19
ASIAN INST OF TOURISM	3,472	0	3,472	231	0	231	485	0	485	23
COLL OF ARCHITECTURE	4,805	276	5,219	320	31	367	572	69	641	18
ASIAN CENTER	0	702	1,053	0	65	98	0	218	218	6
COLLEGE OF BUS ADM	8,586	2,069	11,690	573	229	917	861	292	1,153	22
CSWCD	3,475	1,239	5,334	232	138	439	358	213	571	12
SCHOOL OF ECONOMICS	5,244	1,017	6,770	350	113	519	540	147	687	25
COLLEGE OF FINE ARTS	4,098	69	4,202	273	8	285	747	39	786	18
COLL OF HOME ECONOMICS	11,068	1,044	12,634	737	116	911	1,535	308	1,843	15
COLL OF HUMAN KENETICS	13,254	262	13,647	884	29	927	360	98	458	30
INST OF ISLAMIC STUDIES	0	132	198	0	15	23	0	21	21	6
COLLEGE OF LAW	5,358	0	5,358	357	0	357	516	0	516	24
INST OF LIBRARY SCIENCE	1,299	297	1,745	87	33	137	291	180	471	17
COLLEGE OF MASS COM	7,008	658	7,995	467	73	577	1,009	261	1,270	16
COLLEGE OF MUSIC	2,314	124	2,500	154	14	175	319	38	357	3
NCPAG	2,136	1,458	4,323	142	162	385	414	339	753	15
SOLAIR	0	1,740	2,610	0	193	290	0	375	375	12
S U R P	0	1,064	1,596	0	118	177	0	298	298	10
SCHOOL OF STATISTICS	4,806	645	5,774	320	72	428	487	126	613	19
TMC	0	240	360	0	27	41	0	131	131	28
ASP							0	22	22	

Note:

Student Credit Units = Total No. of Students x Course Credit

Weighted SCUs = UG SCUs + 1.5 * G SCUs

Undergraduate FTES = Total SCU / 15 units

Graduate FTES = Total SCU / 9 units

Weighted FTES = UG FTES + 1.5 * G FTES

Enrollment data is the average of first and second semesters of AY 2001-2002

SCU and FTES data include only the first semester of academic year.

Source: UPD Budget Office

TABLE 2.1
CURRICULUM AND TOTAL COST FOR SELECTED ACADEMIC PROGRAMS
UNIVERSITY OF THE PHILIPPINES - LOS BAÑOS

College / Academic Unit of Program	Instructional Cost per Student Credit		SELECTED ACADEMIC DEGREE PROGRAMS							
	Total Cost	Direct Cost	Agriculture	Sociology	Economics	Computer Science	Chemical Engineering	Electrical Engineering	Forestry	Biology (Education)
Arts and Sciences:	377	281	77	60	67	66	114	86	70	129
Sciences			44	21	22	33	78	50	27	87
Math			6	6	10	12	18	18	9	9
Chemistry			5				39	5	5	17
Physics			3			6	6	15	3	6
Biology			3				9		4	**49**
STS			3	3	3	3	3	3	3	3
Statistics			3	6	3	6	3	3	3	3
Other (Intro to NS)			21	6	6	6		6		
Comm and Literature			15	12	21	15	15	15	15	21
Social Sciences			18	27	24	18	21	21	28	21
Agriculture	2,478	970	**44**							
Forestry	1,579	643							**82**	
Engineering	1,189	531					**72**	**98**		
Economics	818	472	6	3	**53**				3	
Management	818	472	15		9					
Education	377	281								18
Electives	1,091	521	9	21	15	9	6	6		6
Major				**63**		**69**				
TOTAL UNITS			**151**	**147**	**144**	**144**	**192**	**190**	**155**	**153**
Total Cost per Student Credit			*2,478*	*377*	*818*	*377*	*1,189*	*1,189*	*1,579*	*377*
Direct Cost per Student Credit			*970*	*281*	*472*	*281*	*531*	*531*	*643*	*281*
Total Instructional Cost			165,057	71,733	92,338	60,713	135,131	155,489	158,322	61,964
Direct Instructional Cost			78,922	46,929	55,912	42,628	73,395	79,333	73,812	44,436
UPLB Admin Overhead Cost	7,757		31,029	31,029	31,029	31,029	38,787	38,787	31,029	31,029
Central Admin Overhead Cost	1,630		6,520	6,520	6,520	6,520	8,150	8,150	6,520	6,520
TOTAL PROGRAM COST			**202,606**	**109,282**	**129,887**	**98,262**	**182,068**	**202,426**	**195,871**	**99,513**
Ratio: Direct Cost / Total Program Cost			*0.39*	*0.43*	*0.43*	*0.43*	*0.40*	*0.39*	*0.38*	*0.45*

TABLE 2.2
FACULTY LOADING and DISTRIBUTION OF UNITS TO VARIOUS FACULTY ACTIVITIES
UNIVERSITY OF THE PHILIPPINES - LOS BAÑOS
AY 2000-2001 (First Semester only)

COLLEGE	Distribution of Units to Various Faculty Activities					
	Teaching	Research	Extension	Administrative	Others	Total Load
AGRICULTURE	790	569	157	153	205	1,874
FORESTRY & NATURAL RESOURCES	552	97	101	93	97	940
ARTS AND SCIENCES	4,063	215	76	218	510	5,082
ECONOMICS & MANAGEMENT	469	56	19	45	61	650
PUBLIC AFFAIRS	208	74	71	40	20	414
ENGG & AGRO-INDUSTRIAL TECH	603	171	22	88	215	1,099
VETERINARY MEDICINE	297	9	31	51	151	538
HUMAN ECOLOGY	294	69	101	43	51	559
DEV'T COMMUNICATION	182	44	57	67	43	392
ENVIRONMENT SCI. & MGMT	109	32	5	44	7	196
TOTAL	**7,568**	**1,335**	**639**	**843**	**1,358**	**11,743**

COLLEGE	Distribution of Units to Various Faculty Activities (in percent)						%	%
	Teaching	Research	Extension	Administrative	Others	Total Load	$FL_I / (FL_I + FL_{RE})$	$FL_{RE} / (FL_I + FL_{RE})$
AGRICULTURE	42	30	8	8	11	100	52	48
FORESTRY & NATURAL RESOURCES	59	10	11	10	10	100	74	26
ARTS AND SCIENCES	80	4	1	4	10	100	93	7
ECONOMICS & MANAGEMENT	72	9	3	7	9	100	86	14
PUBLIC AFFAIRS	50	18	17	10	5	100	59	41
ENGG & AGRO-INDUSTRIAL TECH	55	16	2	8	20	100	76	24
VETERINARY MEDICINE	55	2	6	9	28	100	88	12
HUMAN ECOLOGY	53	12	18	8	9	100	63	37
DEV'T COMMUNICATION	47	11	14	17	11	100	65	35
ENVIRONMENT SCI. & MGMT	55	16	3	22	4	100	75	25
TOTAL	**64**	**11**	**5**	**7**	**12**	**100**	**79**	**21**

Source: UPLB OVCAA

TABLE 2.3
TOTAL COST OF INSTRUCTION PER STUDENT CREDIT
UNIVERSITY OF THE PHILIPPINES - LOS BAÑOS
CY 2002

COLLEGE	DIRECT COST OF INSTRUCTION			INDIRECT COST OF INSTRUCTION			TOTAL	OPERATING COST PER STUDENT CREDIT				
	PS_I	$MOOE_I$	TOTAL	PS_{OTHERS}	$MOOE_{OTHERS}$	TOTAL	COST	DC / SCU		IC / SCU		TC / SCU
AGRICULTURE	22,237,205		22,237,205	33,388,696	1,205,000	34,593,696	56,830,902	970	39%	1,508	61%	2,478
FORESTRY & NATURAL RESOURCES	9,006,081		9,006,081	12,396,654	694,000	13,090,654	22,096,735	643	41%	935	59%	1,579
ARTS AND SCIENCES	58,048,098		58,048,098	17,978,895	1,867,000	19,845,895	77,893,993	281	75%	96	25%	377
ECONOMICS & MANAGEMENT	8,897,941		8,897,941	5,850,475	669,000	6,519,475	15,417,416	472	58%	346	42%	818
PUBLIC AFFAIRS	306,490		306,490	891,917	500,000	1,391,917	1,698,407	71	18%	321	82%	392
ENGG & AGRO-INDUSTRIAL TECH	9,804,058	159,248	9,963,306	9,789,539	2,567,176	12,356,715	22,320,021	531	45%	658	55%	1,189
VETERINARY MEDICINE	5,318,368		5,318,368	9,388,687	784,433	10,173,120	15,491,488	458	34%	876	66%	1,334
HUMAN ECOLOGY	4,026,387		4,026,387	3,312,292	300,000	3,612,292	7,638,679	516	53%	463	47%	978
DEV'T COMMUNICATION	363,898		363,898	964,515	823,000	1,787,515	2,151,413	59	17%	290	83%	349
TOTAL	**118,008,526**	**159,248**	**118,167,774**	**93,961,669**	**9,409,609**	**103,371,278**	**221,539,052**	**4,000**		**5,494**		**9,495**

Formula:

$PS_I = PS_{Faculty} \times (FL_I / TFL)$

$MOOE_I = (Lab+Lib) \times (FL_I / (FL_I+FL_{RE}))$

$PS_{RE} = PS_{Faculty} \times (FL_{RE} / TFL)$

$MOOE_{RE} = (Lab + Lib) \times (FL_{RE} / (FL_I+FL_{RE})))$

$PS_{OTHERS} = PS_{TOTAL} - PS_I - PS_{RE}$

$MOOE_{OTHERS} = MOOE_{TOTAL} - MOOE_I - MOOE_{RE}$

(Lab+Lib) = Laboratory Supplies + Library Acquisition

Direct Cost of Instruction = $PS_I + MOOE_I$

Indirect Cost of Instruction = $PS_{OTHERS} + MOOE_{OTHERS}$

Total Cost = Direct Cost + Indirect Cost

Source: UPLB Accounting Office

TABLE 2.4
COLLEGE EXPENDITURES ON PERSONAL SERVICES AND MAINTENANCE AND OTHER OPERATING EXPENSES
UNIVERSITY OF THE PHILIPPINES - LOS BAÑOS
CY 2002

COLLEGE	PERSONAL SERVICES (PS)					MAINTENCE & OTHER OPERATING EXPENSES (MOOE)						Current Operating Expenditure	Capital Outlay	GRAND TOTAL
	Faculty	Research	Admin	Others	TOTAL	Office Supplies	Library Acquisition	Laboratory Supplies	Transport & Travel	Others	TOTAL			
AGRICULTURE	52,751,496	3,410,004	19,697,964	221,536	76,081,000	368,689			74,993	761,318	1,205,000	77,286,000		77,286,000
FORESTRY & NATURAL RESOURCES	15,330,204	1,792,728	7,328,652	176,416	24,628,000	142,266			34,048	517,686	694,000	25,322,000		25,322,000
ARTS AND SCIENCES	72,602,052	1,045,788	6,533,184	976	80,182,000	603,340			20,241	1,243,420	1,867,000	82,049,000		82,049,000
ECONOMICS & MANAGEMENT	12,331,548	786,120	2,967,696	87,936	16,173,300	180,258			26,438	462,304	669,000	16,842,300		16,842,300
PUBLIC AFFAIRS	608,976		802,956	68	1,412,000	265,083			21,130	213,787	500,000	1,912,000		1,912,000
ENGG & AGRO-INDUSTRIAL TECH	17,867,748	822,420	3,929,460	106,372	22,726,000	1,454,988		210,128	54,868	1,057,320	2,777,304	25,503,304	269,500	25,772,804
VETERINARY MEDICINE	9,637,728	842,004	4,934,820	448	15,415,000	311,108			43,951	429,374	784,433	16,199,433		16,199,433
HUMAN ECOLOGY	7,640,604		1,811,328	209,068	9,661,000	93,160			47,676	159,164	300,000	9,961,000		9,961,000
DEV'T COMMUNICATION	781,968		745,428	604	1,528,000	370,419			21,099	431,482	823,000	2,351,000		2,351,000
TOTAL	**189,552,324**	**8,699,064**	**48,751,488**	**803,424**	**247,806,300**	**3,789,311**		**210,128**	**344,443**	**5,275,855**	**9,619,737**	**257,426,037**	**269,500**	**257,695,537**

Note: Based on CY 2002 expenditure data.

Source: UPLB Budget Management Office

TABLE 2.5
STUDENT CREDIT UNITS, ENROLLMENT and STUDENT CREDIT PER TOTAL FACULTY LOAD
UNIVERSITY OF THE PHILIPPINES - LOS BAÑOS
AY 2000-2001 (First Semester only)

COLLEGE	Student Credit Units (SCUs)			Fulltime Equivalent Students (FTES)			Enrollment			Student Credit per Total Faculty Load
	UG	Grad	Weighted	UG	Grad	Weighted	UG	Grad	Total	
AGRICULTURE	9,927	1,027	11,468	661.80	114.13	833.00	1,288		1,288	6
FORESTRY & NATURAL RESOURCES	6,499	333	6,999	433.27	37.00	488.77	396	10	406	7
ARTS AND SCIENCES	102,168	815	103,390	6,811.20	90.51	6,946.97	2,797	985	3,782	20
ECONOMICS & MANAGEMENT	7,978	965	9,425	531.86	107.22	692.69	791	228	1,019	14
PUBLIC AFFAIRS	306	1,239	2,165	20.40	137.70	226.95		37	37	5
ENGG & AGRO-INDUSTRIAL TECH	9,096	191	9,383	606.40	21.26	638.29	1,228		1,228	9
VETERINARY MEDICINE	5,677	85	5,805	378.48	9.47	392.69	548		548	11
HUMAN ECOLOGY	3,637	179	3,905	242.43	19.87	272.24	486		486	7
DEV'T COMMUNICATION	2,120	640	3,079	141.30	71.06	247.89	496		496	8
ENVIRONMENT SCI. & MGMT	1,220	593	2,109	81	66	180				11

Note:

Student Credit Units = Total No. of Students x Course Credit

Weighted SCUs = UG SCUs + 1.5 * G SCUs

Undergraduate FTES = Total SCU / 15 units

Graduate FTES = Total SCU / 9 units

Weighted FTES = UG FTES + 1.5 * G FTES

SCU and FTES data include only the first semester of AY 2000-2001.

Enrollment data is the simple average of the first and second semesters of AY 2000-2001.

Source: UPLB OVCAA

TABLE 3.1
CURRICULUM AND TOTAL COST FOR SELECTED ACADEMIC PROGRAMS
UNIVERSITY OF THE PHILIPPINES - MANILA

College / Academic Unit of Program	Instructional Cost per Student Credit		SELECTED ACADEMIC DEGREE PROGRAMS					
	Total Cost	Direct Cost	Computer Science	Biology	Political Science	Nursing	Dentistry*	Medicine*
Arts & Sciences:	458	357	148	153	132	68	73	81
Math			26	9	6	9		
Chemistry			4	36		20		
Physics			10					
Biology			3	**75**				
Other Sciences			3		6			
STS			3	3	3	3		
Computer Science			**51**					
Social Sciences			21	21	60	27		
Communications & Literature			15	9	9	9		
Major					**48**			
Electives			12					
Nursing	825	595				**84**		
Dentistry							**105**	
Medicine								
TOTAL UNITS			**148**	**153**	**132**	**152**	**178**	
Total Cost per Student Credit			*458*	*458*	*458*	*825*		
Direct Cost per Student Credit			*357*	*357*	*357*	*595*		
Total Instructional Cost			67,784	70,074	60,456	100,444	255,736	680,607
Direct Instructional Cost			52,836	54,621	47,124	74,256		
UPM Admin Overhead Cost	11,548		46,192	46,192	46,192	46,192	69,288	80,836
Central Admin Overhead Cost	1,630		6,520	6,520	6,520	6,520	9,780	11,410
TOTAL PROGRAM COST			**120,496**	**122,786**	**113,168**	**153,156**	**334,804**	**772,852**
Ratio: Direct Cost / Total Program Cost			*0.44*	*0.44*	*0.42*	*0.48*		

Note:

*Total Instructional Cost Computation for Dentistry and Medicine:

= [(Total Current Operating Budget / Total Enrollment) x (Total Year of the Course - Two Years of GE subjects)]

+ (Total Cost Per Student Credit of AS subjects x No. of credits taken at Arts and Sciences)

TABLE 3.2
FACULTY LOADING and DISTRIBUTION OF UNITS TO VARIOUS FACULTY ACTIVITIES
UNIVERSITY OF THE PHILIPPINES - MANILA
AY 1997-98 (First Semester only)*

COLLEGE	Distribution of Units to Various Faculty Activities					
	Teaching	Research	Extension	Administrative	Others	Total Load
ALLIED MED PROF	175	24	7	33	12	251
ARTS AND SCIENCES	1,652			82	213	1,858
DENTISTRY	330			48	19	395
MEDICINE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
NURSING	278			39	57	353
PHARMACY	297			27	105	429
PUBLIC HEALTH	379			0	24	403
HEALTH SCIENCES	250			15	12	277
TOTAL	**3,361**	**24**	**7**	**244**	**442**	**3,966**

COLLEGE	Distribution of Units to Various Faculty Activities (in percent)						%	%
	Teaching	Research	Extension	Administrative	Others	Total Load	$FL_I / (FL_I + FL_{RE})$	$FL_{RE} / (FL_I + FL_{RE})$
ALLIED MED PROF	70	10	3	13	5	100	85	15
ARTS AND SCIENCES	89	0	0	4	11	100	100	0
DENTISTRY	84	0	0	12	5	100	100	0
MEDICINE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
NURSING	79	0	0	11	16	100	100	0
PHARMACY	69	0	0	6	24	100	100	0
PUBLIC HEALTH	94	0	0	0	6	100	100	0
HEALTH SCIENCES	90	0	0	5	4	100	100	0
TOTAL	**85**	**1**	**0**	**6**	**11**	**100**	**99**	**1**

Note:

*Due to absence of available data, the study used Nuqui's FTES survey of AY 1997-1998

Faculty includes only those Residential Faculty.

n.a. - not available

TABLE 3.3
TOTAL COST OF INSTRUCTION PER STUDENT CREDIT
UNIVERSITY OF THE PHILIPPINES - MANILA
CY 2002

COLLEGE	DIRECT COST OF INSTRUCTION			INDIRECT COST OF INSTRUCTION			TOTAL	OPERATING COST PER STUDENT CREDIT				
	PS_I	$MOOE_I$	TOTAL	PS_{OTHERS}	$MOOE_{OTHERS}$	TOTAL	COST	DC / SCU		IC / SCU		TC / SCU
ALLIED MED PROF	4,700,598	1,472,206	6,172,804	1,208,725	-300,997	907,728	7,080,532					
ARTS AND SCIENCES	31,756,988	4,026,633	35,783,621	3,960,012	6,248,367	10,208,379	45,992,000	357	78	102	22	458
DENTISTRY	8,384,506	2,667,079	11,051,585	1,651,494	2,065,921	3,717,415	14,769,000	1,688	75	568	25	2,256
MEDICINE												
NURSING	7,883,229	800,333	8,683,562	2,126,771	1,227,667	3,354,438	12,038,000	595	72	230	28	825
PHARMACY	5,671,593	1,405,000	7,076,593	2,522,407	1,246,000	3,768,407	10,845,000					
PUBLIC HEALTH	21,237,105	1,209,866	22,446,971	1,345,895	3,570,134	4,916,029	27,363,000					
HEALTH SCIENCES	6,609,075	0	6,609,075	712,925	2,653,000	3,365,925	9,975,000					
TOTAL	**86,243,095**	**11,581,117**	**97,824,212**	**13,528,228**	**16,710,092**	**30,238,320**	**128,062,532**	**2,640**		**900**		**3,539**

Formula:

$PS_I = PS_{Faculty} \times (FL_I / TFL)$

$MOOE_I = (Lab+Lib) \times (FL_I / (FL_I+FL_{RE}))$

$PS_{RE} = PS_{Faculty} \times (FL_{RE} / TFL)$

$MOOE_{RE} = (Lab + Lib) \times (FL_{RE} / (FL_I+FL_{RE})))$

$PS_{OTHERS} = PS_{TOTAL} - PS_I - PS_{RE}$

$MOOE_{OTHERS} = MOOE_{TOTAL} - MOOE_I - MOOE_{RE}$

(Lab+Lib) = IT Supplies and Laboratory Supplies

Direct Cost of Instruction = $PS_I + MOOE_I$

Indirect Cost of Instruction = $PS_{OTHERS} + MOOE_{OTHERS}$

Total Cost = Direct Cost + Indirect Cost

Source: UPM Budget Office

TABLE 3.4
COLLEGE EXPENDITURES ON PERSONAL SERVICES AND MAINTENANCE AND OTHER OPERATING EXPENSES
UNIVERSITY OF THE PHILIPPINES - MANILA
CY 2002

COLLEGE	PERSONAL SERVICES (PS)			MAINTENANCE AND OTHER OPERATING EXPENSE (MOOE)				Curent Operating Expenditure
	Faculty	Others	TOTAL	Laboratory	Library	Others	TOTAL	
ALLIED MED PROF	6,742,000	3,939,000	10,681,000	1,372,997	360,000	-300,997	1,432,000	12,113,000
ARTS AND SCIENCES	35,717,000	18,210,000	53,927,000	2,766,633	1,260,000	6,248,367	10,275,000	64,202,000
DENTISTRY	10,036,000	8,017,000	18,053,000	2,366,079	301,000	2,065,921	4,733,000	22,786,000
MEDICINE	83,143,000	33,321,000	116,464,000	3,088,274	959,000	5,487,726	9,535,000	125,999,000
NURSING	10,010,000	5,011,000	15,021,000	530,333	270,000	1,227,667	2,028,000	17,049,000
PHARMACY	8,194,000	4,689,000	12,883,000	1,000,000	405,000	1,246,000	2,651,000	15,534,000
PUBLIC HEALTH	22,583,000	17,533,000	40,116,000	804,866	405,000	3,570,134	4,780,000	44,896,000
HEALTH SCIENCES	7,322,000	5,111,000	12,433,000				2,653,000	15,086,000

Source: UPM Budget Office

TABLE 3.5
STUDENT CREDIT UNITS, ENROLLMENT and STUDENT CREDIT PER TOTAL FACULTY LOAD
UNIVERSITY OF THE PHILIPPINES - MANILA
AY 2000-2003 (First Semester only)

COLLEGE	Student Credit Units (SCUs)			Fulltime Equivalent Students (FTES)			Enrollment			Student Credit per Total Faculty Load
	UG	Grad	Weighted	UG	Grad	Weighted	UG	Grad	Total	
ALLIED MED PROF							458	32	490	
ARTS AND SCIENCES	48,991	792	50,179	3,266	88	3,398	1,812	127	1,939	27
DENTISTRY	3,273	0	3,273	218	0	218	389	21	410	8
MEDICINE							867	112	979	
NURSING	7,211	57	7,296	481	6	490	247	46	293	21
PHARMACY							506	19	525	
PUBLIC HEALTH							270	256	526	
HEALTH SCIENCES							122		122	
NTTC-HP								74	74	

Note:

Student Credit Units = Total No. of Students x Course Credit

Weighted SCUs = UG SCUs + 1.5 * G SCUs

Undergraduate FTES = Total SCU / 15 units

Graduate FTES = Total SCU / 9 units

Weighted FTES = UG FTES + 1.5 * G FTES

Enrolment data includes only the first semester of AY 2001-2002.

SCUs and FTES data taken from first semester of AY 2002-2003.

Source: UPM Office of University Registrar

TABLE 4.1
CURRICULUM AND TOTAL COST FOR SELECTED ACADEMIC PROGRAMS
UNIVERSITY OF THE PHILIPPINES - VISAYAS

College / Academic Unit of Program	Instructional Cost per Student Credit		SELECTED ACADEMIC DEGREE PROGRAMS							
			MAIN CAMPUS (ILOILO)			CEBU			TACLOBAN	
	Total Cost	Direct Cost	Fisheries	Management	Chemical Engineering	Political Science	Biology	Computer Science	Computer Science	Political Science
UPV ILOILO:										
Arts & Sciences:	748	582	75	79	107	141	150	134	134	132
Math			9	13	18	6	12	21	21	9
Chemistry			15		23		25			
Physics			5		15		8	8	8	
Biology			10				**47**			
Other Natural Science (Introd)			6	6	3	6	3	6	6	6
STS			3	3	3	3	3	18	18	12
Social Science (Other)			18	36	24	33	27	24	24	51
Communication & Literature			9	9	9	21	12	3	3	3
Major						**72**		**45**	**45**	**39**
Elective			0	12	12		13			
Others								9	9	12
Bus. Management	644	431	18	**63**						
Economics	644	431	3					6	6	
Fisheries	12,919	2,630	**38**							
Engineering	*5,205*	2,176			**71**					
UPV CEBU	823	469								
UPV TACLOBAN	872	436								
TOTAL UNITS			**134**	**142**	**178**	**141**	**150**	**140**	**140**	**132**
Total Cost per Student Credit			*12,919*	*644*	*5,205*	*823*	*823*	*823*	*872*	*872*
Direct Cost per Student Credit			*2,630*	*431*	*2,176*	*469*	*469*	*469*	*436*	*436*
Total Instructional Cost			560,546	99,664	449,591	116,043	123,450	115,220	122,080	115,104
Direct Instructional Cost			152,641	73,131	216,770	66,129	70,350	65,660	61,040	57,552
UPV Admin Overhead Cost	6,405		25,620	25,620	32,025	25,620	25,620	25,620	25,620	25,620
Central Admin Overhead Cost	1,630		6,520	6,520	8,150	6,520	6,520	6,520	6,520	6,520
TOTAL PROGRAM COST			**592,686**	**131,804**	**489,766**	**148,183**	**155,590**	**147,360**	**154,220**	**147,244**
Ratio: Direct Cost / Total Program Cost			*0.26*	*0.55*	*0.44*	*0.45*	*0.45*	*0.45*	*0.40*	*0.39*

TABLE 4.2
FACULTY LOADING and DISTRIBUTION OF UNITS TO VARIOUS FACULTY ACTIVITIES
UNIVERSITY OF THE PHILIPPINES - VISAYAS
AY 2000-2001 (First Semester only)

COLLEGE	Distribution of Units to Various Faculty Activities					
	Teaching	Research	Extension	Administrative	Others	Total Load
ARTS AND SCIENCES	1,621	9		146		1,776
FISHERIES & OCEAN SCIENCES	183	33		77		293
MANAGEMENT	575			81		656
S. TECHNOLOGY	55			36		91
UPV CEBU	1,270			60		1,330
UPV TACLOBAN	942			60		1,002
TOTAL	**4,646**	**42**	**0**	**459**	**0**	**5,148**

COLLEGE	Distribution of Units to Various Faculty Activities (in percent)						%	%
	Teaching	Research	Extension	Administrative	Others	Total Load	$FL_I / (FL_I + FL_{RE})$	$FL_{RE} / (FL_I + FL_{RE})$
ARTS AND SCIENCES	91	1	0	8	0	100	99	1
FISHERIES & OCEAN SCIENCES	62	11	0	26	0	100	85	15
MANAGEMENT	88	0	0	12	0	100	100	0
S. TECHNOLOGY	60	0	0	40	0	100	100	0
UPV CEBU	95	0	0	5	0	100	100	0
UPV TACLOBAN	94	0	0	6	0	100	100	0
TOTAL	**90**	**1**	**0**	**9**	**0**	**100**	**99**	**1**

Source: UPV

TABLE 4.3
TOTAL COST OF INSTRUCTION PER STUDENT CREDIT
UNIVERSITY OF THE PHILIPPINES - VISAYAS
CY 2002

COLLEGE	DIRECT COST OF INSTRUCTION			INDIRECT COST OF INSTRUCTION			TOTAL	OPERATING COST PER STUDENT CREDIT				
	PS_I	$MOOE_I$	TOTAL	PS_{OTHERS}	$MOOE_{OTHERS}$	TOTAL	COST	DC / SCU		IC / SCU		TC / SCU
ARTS AND SCIENCES	50,916,766	426,664	51,343,430	10,387,400	4,285,385	14,672,785	66,016,214	582	78%	166	22%	748
FISHERIES & OCEAN SCIENCES	8,020,364	152,306	8,172,670	28,297,810	3,683,119	31,980,929	40,153,599	2,630	20%	10,290	80%	12,919
MANAGEMENT	11,944,220	225,000	12,169,220	3,501,804	2,536,981	6,038,785	18,208,005	431	67%	214	33%	644
S. TECHNOLOGY	2,155,284	190,566	2,345,850	2,727,021	537,615	3,264,636	5,610,486	2,176	42%	3,028	58%	5,205
UPV CEBU	36,327,869	210,145	36,538,014	17,841,332	9,743,607	27,584,939	64,122,953	469	57%	354	43%	823
UPV TACLOBAN	21,687,231	85,661	21,772,892	13,617,568	8,143,742	21,761,310	43,534,202	436	50%	436	50%	872
TOTAL	**131,051,735**	**1,290,341**	**132,342,076**	**76,372,935**	**28,930,449**	**105,303,384**	**237,645,460**	**6,723**		**14,488**		**21,211**

Formula:

$PS_I = PS_{Faculty} \times (FL_I / TFL)$

$MOOE_I = (Lab+Lib) \times (FL_I / (FL_I+FL_{RE}))$

$PS_{RE} = PS_{Faculty} \times (FL_{RE} / TFL)$

$MOOE_{RE} = (Lab + Lib) \times (FL_{RE} / (FL_I+FL_{RE})))$

$PS_{OTHERS} = PS_{TOTAL} - PS_I - PS_{RE}$

$MOOE_{OTHERS} = MOOE_{TOTAL} - MOOE_I - MOOE_{RE}$

(Lab+Lib) = IT Supplies and Laboratory Supplies

Direct Cost of Instruction = $PS_I + MOOE_I$

Indirect Cost of Instruction = $PS_{OTHERS} + MOOE_{OTHERS}$

Total Cost = Direct Cost + Indirect Cost

Source: UPV Accounting Office

TABLE 4.4
COLLEGE EXPENDITURES ON PERSONAL SERVICES AND MAINTENANCE AND OTHER OPERATING EXPENSES
UNIVERSITY OF THE PHILIPPINES - VISAYAS
CY 2002

COLLEGE	PERSONAL SERVICES (PS)				MAINTENANCE AND OTHER OPERATING EXPENSES (MOOE)					Current Operating Expenditure	CAPITAL OUTLAY	GRAND TOTAL
	Faculty	Research	Admin	TOTAL	Office Supplies	Laboratory Supplies	Transpo & Travel	Others	TOTAL			
ARTS AND SCIENCES	55,768,584	202,311	5,615,901	61,586,796	812,765	429,032	449,638	3,022,982	4,714,417	66,301,213	1,179,355	67,480,568
FISHERIES & OCEAN SCIENCES	12,842,144	5,383,252	19,540,102	37,765,498	226,359	179,790	274,448	3,182,312	3,862,909	41,628,407	14,424	41,642,831
MANAGEMENT	13,626,066	0	1,819,958	15,446,024	975,000	225,000	179,707	1,382,274	2,761,981	18,208,005	571,584	18,779,589
S. TECHNOLOGY	3,578,958	408,277	895,070	4,882,305	36,832	190,566	54,690	446,093	728,181	5,610,486	130,070	5,740,556
UPV CEBU	38,043,849	2,084,607	14,040,745	54,169,201	651,799	210,145	361,997	8,729,811	9,953,752	64,122,953	5,813,441	69,936,394
UPV TACLOBAN	23,068,202	1,203,653	11,032,944	35,304,799	449,999	85,661	854,375	6,839,368	8,229,403	43,534,202	1,073,767	44,607,969
	146,927,803	***9,282,100***	***52,944,720***	***209,154,623***	***3,152,754***	***1,320,194***	***2,174,855***	***23,602,840***	***30,250,643***	***239,405,266***	***8,782,641***	***248,187,907***

Note:

Expenditures on MOOE excludes utilities, security and janitorial services for which payment is centralized under Advanced and Higher Education function

Source: UPV Budget Office

TABLE 4.5
STUDENT CREDIT UNITS, ENROLLMENT and STUDENT CREDIT PER TOTAL FACULTY LOAD
UNIVERSITY OF THE PHILIPPINES - VISAYAS
AY 2000-2001 (First Semester only)

College / Unit	Student Credit Units (SCUs)			Fulltime Equivalent Students (FTES)			Enrollment			Student Credit per Total Faculty Load
	UG	Grad	Weighted	UG	Grad	Weighted	UG	Grad	Total	
ARTS AND SCIENCES	43,058	702	44,111	2,871	78	2,988	1,346	147	1,493	25
FISHERIES & OCEAN SCIENCES	1,017	358	1,554	68	40	127	205	56	261	5
MANAGEMENT	12,432	1,134	14,133	829	126	1,018	1,204	261	1,464	22
S. TECHNOLOGY	539	0	539	36	0	36	105	0	105	6
UPV CEBU	38,976	0	38,976	2,598	0	2,598	1,364	238	1,602	29
UPV TACLOBAN	23,871	735	24,974	1,591	82	1,714	1,212	95	1,306	25

Note:

Student Credit Units = Total No. of Students x Course Credit

Weighted SCUs = UG SCUs + 1.5 * G SCUs

Undergraduate FTES = Total SCU / 15 units

Graduate FTES = Total SCU / 9 units

Weighted FTES = UG FTES + 1.5 * G FTES

Enrollment data is the average of first and second semesters of AY 2001-2002

SCU and FTES data include only the first semester of academic year.

Source: UPV

TABLE A.
U.P. BUDGET ALLOCATION BY SERVICES ACROSS ITS FOUR MAJOR CONSTITUENT UNIVERSITIES, CY 2001

Date Printed: 10/23/2003 - 7:46 AM

	SYSTEM	CENTRAL ADMIN	DILIMAN	LOS BAÑOS	MANILA	VISAYAS
(in thousand pesos)						
TOTAL BUDGET (Gross)	**4,700,834**	**233,065**	**1,321,200**	**849,941**	**1,635,857**	**290,394**
TOTAL BUDGET (net of PGH and Others)	**3,414,665**	**233,065**	**1,321,200**	**830,662**	**408,967**	**290,394**
Administration and Other Support Services	**837,384**	**109,839**	**258,259**	**151,087**	**76,718**	**48,866**
Gen. Administration & Support Services	671,905	101,321	168,632	98,566	76,718	38,043
Medical Services	49,794		29,942	14,320		4,810
Auxilliary Services	115,685	8,518	59,685	38,201		6,013
Program Budget	**2,577,281**	**123,226**	**1,062,941**	**679,575**	**332,249**	**241,528**
Advanced & Higher Education Services	1,989,239	110,940	840,338	397,513	285,142	225,871
Research & Extension Services	588,042	12,286	222,603	282,062	47,107	15,657
Research Services	374,015	9,813	135,425	182,216	33,129	9,311
Extension Services	214,027	2,473	87,178	99,846	13,978	6,346
UP PGH	*1,166,563*				*1,166,563*	
Others	*119,606*			*19,279*	*60,327*	
(percentage distribution)						
TOTAL BUDGET (net)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Administration and Other Support Services	**24.5**	**47.1**	**19.5**	**18.2**	**18.8**	**16.8**
Program Budget:	**75.5**	**52.9**	**80.5**	**81.8**	**81.2**	**83.2**
Advanced & Higher Education Services	58.3	47.6	63.6	47.9	69.7	77.8
Research & Extension Services	17.2	5.3	16.8	34.0	11.5	5.4
Share in Program Budget: (%)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Advanced & Higher Education Services	77.2	90.0	79.1	58.5	85.8	93.5
Research and Extension Services	22.8	10.0	20.9	41.5	14.2	6.5
TOTAL BUDGET (Gross)	**4,700,834**	**233,065**	**1,321,200**	**849,941**	**1,635,857**	**290,394**
TOTAL BUDGET (net of PGH and Others)	**3,414,665**	**233,065**	**1,321,200**	**830,662**	**408,967**	**290,394**
INSTRUCTION	**2,635,562**	**209,828**	**1,044,512**	**485,890**	**350,983**	**271,569**
Advanced & Higher Education Services per IOB	1,989,239	110,940	840,338	397,513	285,142	225,871
Share in Administration and Other Support Services [1]	646,323	98,888	204,174	88,377	65,841	45,698
RESEARCH & EXTENSION	**779,103**	**23,237**	**276,688**	**344,772**	**57,984**	**18,825**
Research and Extension Services per IOB	588,042	12,286	222,603	282,062	47,107	15,657
Share in Administration and Other Support Services [2]	191,061	10,951	54,085	62,710	10,877	3,168
PGH and Others	**1,286,169**	**-**	**-**	**19,279**	**1,226,890**	**-**
ENROLLMENT:						
Weighted Enrollment (= .75*lab school+1.0*UG+1.5*G)	**60,678**		**31,181**	**11,393**	**5,702**	**7,135**
Total Enrollment	**55,677**		**28,032**	**10,858**	**5,358**	**7,023**
College Educ. Lab. School	3,111		1,752	521	-	838
Undergraduate	41,008		19,107	9,007	4,671	5,542
Graduate	11,558		7,173	1,330	687	643
TOTAL BUDGET (Gross) PER STUDENT:	**77,471**	**3,841**	**42,373**	**74,604**	**286,917**	**40,700**
TOTAL BUDGET (Net) PER STUDENT:	**56,275**	**3,841**	**42,373**	**72,911**	**71,730**	**40,700**
INSTRUCTION:	**43,435**	**3,458**	**33,499**	**42,649**	**61,560**	**38,062**
Advanced & Higher Education Services per IOB	32,783	1,828	26,951	34,892	50,012	31,657
Share in Administration and Other Support Services	10,652	1,630	6,548	7,757	11,548	6,405
RESEARCH & EXTENSION:	**12,840**	**383**	**8,874**	**30,262**	**10,170**	**2,638**
Research and Extension Services per IOB	9,691	202	7,139	24,758	8,262	2,194
Share in Administration and Other Support Services	3,149	180	1,735	5,504	1,908	444
PGH and Others	**21,197**			**1,692**	**215,187**	
COST OF RESEARCH & EXTENSION:	**779,103**	**23,237**	**298,356**	**380,659**	**59,078**	**20,585**
Percentage Share of R&E in Total Budget Net of PGH and Others	*22.8*	*10.0*	*22.6*	*45.8*	*14.4*	*7.1*
Research & Extension Services	588,042	12,286	222,603	282,062	47,107	15,657
Share in Administration and Other Support Services	191,061	10,951	54,085	62,710	10,877	3,168
Share of R&E in College/ Unit Budget			21,668	35,887	1,093	1,760
Share of R&E in College/ Unit Budget ***Per Student***			*695*	*3,150*	*192*	*247*

Note:

[1] Share of Instruction in Total Administration and Other Support Services = [Instruction Budget / Total Program Budget] x Total Budget for Administration and Other Support Services

[2] Share of R&E in Total Administration and Other Support Services = [R&E Budget / Total Program Budget] x Total Budget for Administration and Other Support Services

Source: Summary of 2001 Internal Operating Budget of the UP System, UPS Budget Office.

TABLE B.
SUMMARY OF TOTAL PROGRAM COST FOR SELECTED ACADEMIC PROGRAMS
FOUR MAJOR U.P. CONSTITUENT UNIVERSITIES - DILIMAN, LOS BANOS, MANILA and VISAYAS

UP DILIMAN	Instructional		SELECTED ACADEMIC DEGREE PROGRAMS											
	Total Cost	Direct Cost	Chemistry	Physics	Biology	Computer Science	Chemical Engineering	Mechanical Engineering	Electrical Engineering	Political Science	Economics	Business Admin.	Secondary Education	Law
Total Cost per Student Credit			*1,100*	*1,100*	*1,100*	*1,127*	*1,127*	*1,127*	*1,127*	*743*	*1,017*	*850*	*1,255*	*2,658*
Direct Cost per Student Credit			*472*	*472*	*472*	*536*	*536*	*536*	*536*	*485*	*423*	*364*	*1,078*	*426*
Total Instructional Cost			156,069	180,269	151,698	145,318	183,067	177,036	190,226	110,984	122,982	124,774	153,100	353,514
Direct Instructional Cost			71,781	82,165	70,260	70,376	87,844	85,768	92,183	63,196	60,066	59,105	118,360	56,658
UPD Admin Overhead Cost	6,548		26,192	26,192	26,192	26,192	32,740	32,740	32,740	26,192	26,192	26,192	26,192	26,192
Central Admin Overhead Cost	1,630		6,520	6,520	6,520	6,520	8,150	8,150	8,150	6,520	6,520	6,520	6,520	6,520
TOTAL PROGRAM COST			188,781	212,981	184,410	178,030	223,957	217,926	231,116	143,696	155,694	157,486	185,812	386,226
Ratio: Direct Cost / Total Program Cost			*0.38*	*0.39*	*0.38*	*0.40*	*0.39*	*0.39*	*0.40*	*0.44*	*0.39*	*0.38*	*0.64*	*0.15*
Rate of Increase of Program Cost by R&E			*20.3*	*18.0*	*20.8*	*21.5*	*21.4*	*22.0*	*20.7*	*26.6*	*24.6*	*24.3*	*20.6*	*9.9*

UP LOS BANOS	Instructional		SELECTED ACADEMIC DEGREE PROGRAMS							
	Total Cost	Direct Cost	Agriculture	Sociology	Economics	Computer Science	Chemical Engineering	Electrical Engineering	Forestry	Biology (Education)
Total Cost per Student Credit			*2,478*	*377*	*818*	*377*	*1,189*	*1,189*	*1,579*	*377*
Direct Cost per Student Credit			*970*	*281*	*472*	*281*	*531*	*531*	*643*	*281*
Total Instructional Cost			165,057	71,733	92,338	60,713	135,131	155,489	158,322	61,964
Direct Instructional Cost			78,922	46,929	55,912	42,628	73,395	79,333	73,812	44,436
UPLB Admin Overhead Cost	7,757		31,029	31,029	31,029	31,029	38,787	38,787	31,029	31,029
Central Admin Overhead Cost	1,630		6,520	6,520	6,520	6,520	8,150	8,150	6,520	6,520
TOTAL PROGRAM COST			202,606	109,282	129,887	98,262	182,068	202,426	195,871	99,513
Ratio: Direct Cost / Total Program Cost			*0.39*	*0.43*	*0.43*	*0.43*	*0.40*	*0.39*	*0.38*	*0.45*
Rate of Increase of Program Cost by R&E			*66.0*	*122.3*	*102.9*	*136.0*	*91.8*	*82.5*	*68.2*	*134.3*

UP MANILA	Instructional		SELECTED ACADEMIC DEGREE PROGRAMS					
	Total Cost	Direct Cost	Computer Science	Biology	Political Science	Nursing	Dentistry*	Medicine*
Total Cost per Student Credit			*458*	*458*	*458*	*825*		
Direct Cost per Student Credit			*357*	*357*	*357*	*595*		
Total Instructional Cost			67,784	70,074	60,456	100,444	255,736	680,607
Direct Instructional Cost			52,836	54,621	47,124	74,256		
UPM Admin Overhead Cost	11,841		47,364	47,364	47,364	47,364	71,046	82,887
Central Admin Overhead Cost	1,630		6,520	6,520	6,520	6,520	9,780	11,410
TOTAL PROGRAM COST			121,668	123,958	114,340	154,328	336,562	774,904
Ratio: Direct Cost / Total Program Cost			*0.43*	*0.44*	*0.41*	*0.48*		
Rate of Increase of Program Cost by R&E			*34.1*	*33.4*	*36.2*	*26.9*	*18.5*	*9.4*

UP VISAYAS	Instructional Cost per Student		SELECTED ACADEMIC DEGREE PROGRAMS							
			MAIN CAMPUS (ILOILO)			CEBU			TACLOBAN	
	Total Cost	Direct Cost	Fisheries	Mgmt.	Chemical Eng'g	Political Science	Biology	Computer Science	Computer Science	Political Science
Total Cost per Student Credit			*12,919*	*644*	*5,205*	*823*	*823*	*823*	*872*	*872*
Direct Cost per Student Credit			*2,630*	*431*	*2,176*	*469*	*469*	*469*	*436*	*436*
Total Instructional Cost			560,546	99,664	449,591	116,043	123,450	115,220	122,080	115,104
Direct Instructional Cost			152,641	73,131	216,770	66,129	70,350	65,660	61,040	57,552
UPV Admin Overhead Cost	6,405		25,620	25,620	32,025	25,620	25,620	25,620	25,620	25,620
Central Admin Overhead Cost	1,630		6,520	6,520	8,150	6,520	6,520	6,520	6,520	6,520
TOTAL PROGRAM COST			592,686	131,804	489,766	148,183	155,590	147,360	154,220	147,244
Ratio: Direct Cost / Total Program Cost			*0.26*	*0.55*	*0.44*	*0.45*	*0.45*	*0.45*	*0.40*	*0.39*
Rate of Increase of Program Cost by R&E			*1.9*	*8.8*	*2.9*	*7.8*	*7.4*	*7.8*	*7.5*	*7.8*

TABLE C.
COMPARATIVE COST OF SELECTED PROGRAMS FROM SELECTED HIGHER EDUCATIONAL INSTITUTIONS, 2001

	Selected Academic Programs from Selected HEIs	Direct Cost (P '000)	Total Cost (P '000)	Ratio of Direct Cost to Total Cost (%)	Average Cost per year
A.	**Computer Science**				
	UP Diliman	70.4	178.3	39.5	44.6
	UP Los Baños	42.6	98.9	43.1	24.7
	UP Manila	52.8	121.7	43.4	30.4
	UP Visayas - Cebu	65.7	147.4	44.6	36.8
	UP Visayas - Tacloban	61.0	154.2	39.6	38.6
	University of Northern Philippines	39.1	73.2	53.4	18.3
	Mariano Marcos State University	64.8	118.4	54.7	29.6
B.	**Natural Sciences**				
	UP Diliman (Biology)	70.3	184.4	38.1	46.1
	UP Diliman (Physics)	82.1	213.0	38.5	53.2
	UP Los Baños (Biology)	44.4	100.1	44.3	25.0
	UP Manila (Biology)	54.6	124.0	44.1	31.0
	UP Visayas - Cebu (Biology)	70.4	155.6	45.2	38.9
	Private HEI (Chemistry)	134.0	232.0	57.8	58.0
	University of Northern Philippines (Physics)	58.0	85.2	68.1	21.3
	University of Northern Philippines (Math)	46.0	73.2	62.8	18.3
	University of Northern Philippines (Biology)	39.5	66.7	59.2	16.7
	Mariano Marcos State University (Biology)	57.9	116.7	49.6	29.2
C.	**Economics**				
	UP Diliman	60.1	155.7	38.6	38.9
	UP Los Baños	55.9	130.5	42.8	32.6
	Private HEI	61.4	149.6	41.0	37.4
	Mariano Marcos State University	52.5	111.3	47.2	27.8
D.	**Political Science**				
	UP Diliman	63.2	143.7	44.0	35.9
	UP Manila	47.1	114.3	41.2	28.6
	UP Visayas - Tacloban	57.6	147.2	39.1	36.8
	University of Northern Philippines	30.9	58.1	53.2	14.5
	Don Mariano Marcos Memorial State University	62.9	83.3	75.5	20.8
	Mariano Marcos State University (Sociology)	69.8	128.6	54.3	32.2
E.	**Engineering**				
	UP Diliman (Chemical)	87.8	224.0	39.2	44.8
	UP Los Baños (Chemical)	73.4	182.8	40.1	36.6
	UP Visayas - Iloilo (Chemical)	216.8	489.8	44.3	98.0
	Don Mariano Marcos Memorial State University (Electrical)	83.0	108.6	76.4	21.7
	Don Mariano Marcos Memorial State University (Mechanical)	87.8	113.3	77.5	22.7
	University of Northern Philippines (Civil)	58.3	92.4	63.1	18.5
F.	**Education**				
	UP Diliman	118.4	185.8	63.7	46.5
	Philippine Normal University	175.0	261.2	67.0	65.3
	University of Northern Philippines (Secondary)	73.7	100.9	73.0	25.2
	Aklan State University	43.6	98.5	44.3	24.6
	Mariano Marcos State University (Elementary)	68.1	126.9	53.7	31.7
	Don Mariano Marcos Memorial State University (Elementary - HELE)	206.0	587.6	35.1	146.9
	Don Mariano Marcos Memorial State University (Secondary - HE & Technology)	215.5	597.1	36.1	149.3
G.	**Agriculture**				
	UP Los Baños	78.9	203.2	38.8	50.8
	Aklan State University	94.6	151.1	62.6	37.8
	Don Mariano Marcos Memorial State University	177.2	558.8		139.7
	Mariano Marcos State University	109.9	168.7	65.1	42.2
H.	**Fishery**				
	UP Visayas	152.6	592.7	25.7	148.2
	Aklan State University	227.9	282.8	80.6	70.7
	Don Mariano Marcos Memorial State University	334.2	398.9	83.8	99.7
I.	**Business Administration**				
	UP Diliman	59.1	157.5	37.5	39.4
	UP Visayas - Iloilo	73.1	131.8	55.5	33.0
	University of Northern Philippines	27.8	55.1	50.5	13.8
	Don Mariano Marcos Memorial State University (Management)	64.5	84.9	76.0	21.2
	Mariano Marcos State University (Management)	52.1	110.9	47.0	27.7
J.	**Health Sciences**				
	UP Manila (Medicine, 7 years)		774.9		110.7
	UP Manila (Dentistry, 5 years)		336.6		61.0
	UP Manila (Nursing, 4 years)	74.3	154.3	48.2	38.6

Note: Non-UP HEI data were taken from the study conducted by DLSU Research Team.

TABLE D.
DLSU TEAM COST ESTIMATION BY DEGREE PROGRAM IN SELECTED HEI, 2002

	Private HEI (DLSU)		SUC (PNU)		University of Northern Philippines (SUC)								Aklan State university (Main Campus - Banga)		
	Econ	Chem-istry	Teacher Training Physics[2]	Diete-tics	BSBA Mgmt[3]	Math. & Stat	Comp. Science[4]	Political Science	Teacher Training 2ndary	Biology	Nursing	Civil Eng'g	Fisher-ies[5]	Teacher Training 2ndary	Agri.
Direct Cost	61,413	134,037	174,990	132,563	27,710	45,380	39,382	31,072	74,012	38,827	40,531	58,499	227,942	43,648	94,595
Indirect Cost	88,170	97,967	86,172	86,172	27,505	27,505	34,381	27,505	27,505	27,505	27,505	34,381	54,887	54,887	56,482
Total Cost	149,583	232,004	261,162	218,735	55,215	72,885	73,763	58,577	101,517	66,332	68,036	92,880	282,829	98,535	151,077
Direct Cost of Extra Courses[1]	6,107	5,738													
Ratios: (%)															
Direct Cost/Total Cost	41.1	57.8	67.0	60.6	50.2	62.3	53.4	53.0	72.9	58.5	59.6	63.0	80.6	44.3	62.6
Adjusted Direct Cost/Total Cost	37.0	55.3	-												
Indirect Cost/Total Cost	58.9	42.2	33.0	39.4	49.8	37.7	46.6	47.0	27.1	41.5	40.4	37.0	19.4	55.7	37.4
Total Credits in the Curriculum	**175**	**175**	**190**	**156**	**179**	**191**	**190**	**167**	**177**				**163**	**161**	**153**

	Don Mariano Marcos Memorial State University										Mariano Marcos State University								
	Main Campus						San Fernando City												
	Law	Forestry	Elem. Educ.	Vet. Medicine	Agri.	Educ. Elem.	Mgmt.	Political Science	Electric. Eng'g	Mech. Eng'g	Fish. Agri	Agri.	Biology	Electric. Eng'g	Mech. Eng'g	Manage-ment	Comp. Science	Seconda ry Educ.	Sociology
Direct Cost	55,240	183,800	117,199	113,496	177,170	205,987	64,534	62,896	83,048	87,784	232,624	109,903	57,940	108,052	98,568	45,935	57,529	81,306	69,798
Indirect Cost	20,413	381,643	20,413	381,642	381,642	381,642	20,412	20,412	25,515	25,515	58,813	58,813	58,813	73,516	73,516	58,812	58,803	58,813	58,813
Total Cost	75,653	565,443	137,612	495,138	558,812	587,629	84,946	83,308	108,563	113,299	291,437	168,716	116,753	181,568	172,084	104,747	116,332	140,119	128,611
Ratios: (%)																			
Direct Cost/Total Cost	73.0	32.5	85.2	22.9	31.7	35.1	76.0	75.5	76.5	77.5	79.8	65.1	49.6	59.5	57.3	43.9	49.5	58.0	54.3
Indirect Cost/Total Cost	27.0	67.5	14.8	77.1	68.3	64.9	24.0	24.5	23.5	22.5	20.2	34.9	50.4	40.5	42.7	56.1	50.5	42.0	45.7
No. credits in the curriculum		**162**		**267**	**170**	**170**	**174**	**164**	**226**	**164**									

Notes:

[1]The cost of classes in Religion and Physical Education are excluded. In SUCs Physical Education is not counted in the credits

[2] Included in Direct Cost are MDDE for lab in Chemistry P18,337.18 in Teacher Training Physics and P16,440 in Dietetics.

[3]The UNP offer 9 majors in Business whose total cost ranges from P53,314. (H&R Management) to P58,236 BS Accounting.

[4]The annual indirect cost of P6808.78 which is charged to all program is charged for 2 summers.

[5]Cost is high because there are too few students. Ave. class size = 8-9. GE course enroll only fishery students. Total enrollment 49 in agri enrollment = 47. The university operates too many campuses.