

The Continuous University

The Plan For Restructuring Christopher Newport University

December 20, 1994

Christopher Newport University

The Plan for Restructuring

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Christopher Newport University

The Plan for Restructuring

Executive Summary

The Christopher Newport University restructuring plan sets forth the vision of the "Continuous University" and charts the course for the implementation of that vision. This restructuring reflects a significant evolution in the philosophy and operation of the institution -- an evolution that is consistent with the goals and criteria of the Commonwealth and that is responsive to the needs of its citizens. The plan will achieve productivity enhancements, dollar savings and cost avoidances in excess of \$6,900,000 over the next five years. These data are summarized in Annex Three. Below are highlights of the actions taken in response to the General Assembly's five objectives.

- Contract a portion of the faculty to teach during the summer months
- Increase evening courses
- Begin a "Weekend University"
- Reduce summer school pay by 46 percent
- Arrange for "sub-semesters"
- Increase enrollments for CNU On-Line
- Restructure the general education curriculum
- Expand opportunities for internships
- Expand opportunities for cooperative education programs
- Alter laboratory formats
- Use innovative courses to allow students to fulfill foreign language requirements
- Schedule large class sections
- Streamline advising
- Restructure the University's Student Services area
- Privatize services such as grounds maintenance, printing, and housekeeping
- Utilize space more efficiently
- Automate procedures for registration, purchasing, budgeting, and personnel management
- Eliminate remedial courses
- Increase availability of credit by examination
- Better utilize physical plant through the use of night, weekend, summer, and on-line courses
- Create the Office of Institutional Effectiveness
- Increase connections to the private sector
- Increase connections to the public schools
- Continue and increase cooperation with regional governments through the Edwin A. Joseph Center for the Study of Local and Regional Government
- Continue and expand cooperative ventures with NASA and CEBAF
- Continue development of SEVAnet

By almost any measure, CNU is already one of the most efficient institutions of higher education in the Commonwealth. The changes proposed in this restructuring plan will increase that efficiency while maintaining the high quality of the University's programs.

Preface to the Plan for Restructuring

THE CONTINUOUS UNIVERSITY

The mission statement of Christopher Newport University dedicates the University "to the discovery, interpretation, dissemination, and application of knowledge" to the "benefit of the constituencies of the University, the Virginia Peninsula, the Commonwealth, the nation, and the world." Knowledge is therefore the medium of the work of the University, and human benefit is the end of such work.

Human knowledge acquires significance in many ways, and one of the most powerful of these ways is the identification of continuous structures that lend meaning to discrete events. The manifestations of this phenomenon surround us: The discrete events of human history, for example, acquire significance only when given the continuous context of the flow and evolution of trends. ideas, movements, and historical forces. The economies of regions, countries, and, indeed, the world, comprise the movement of countless numbers of individual units of currency from place to place; however, they are understood and managed not in terms of incomprehensible summations of individual transactions, but rather from the imposition of appropriate continuous models that lend to them both comprehensibility and human significance. Populations (including populations of students at universities) grow or shrink one person at a time; but the implications of population dynamics can be neither understood nor accommodated in the absence of their being treated as continuous phenomena through the use of continuous models. Paradoxically, the modern computer (and its life-blood, the stored program) is the epitome of discrete (digital) technology; and yet the significance of computing in modern life does not derive from a cumulative understanding of the execution of tens of millions of instructions per second; rather, it flows from continuous perceptions of the effects of such executions -- regardless of whether the instructions are being executed in the context of video games, compact disk recordings, or simulations of scientific phenomena. In a very compelling sense, the capacity to render the discrete into the continuous is the essence not just of human knowledge but of human consciousness.

The advent of computer and telecommunications technology has caused life in contemporary society to become a metaphor of this reality. What were once (discrete) "banker's hours" for the transaction of personal business have evolved into (continuously available) automatic teller machines; "telecommuting" is blurring the once-clear distinction between (discrete) work time and home time into a (continuous) mix of the two. And access to all manner of resources -- from libraries to stock exchanges to office files -- has escaped the constraints of once-standard (discrete) times and places for such activities and has become a continuous process in which individuals engage literally around the clock and around the calendar from their homes, their automobiles, and their workplaces. The world has, in effect, become a continuous model; and the continuous university is modern higher education's component of that model.

How ironic it is that while the university has been the springboard for much of this change, it has itself in large measure re-

mained discrete -- segmented and compartmentalized -- in its own functions. Instruction is organized into (discrete) semesters of fixed length and delivered in lectures (whether "live" or projected to a remote site) that require the presence of participants at prescribed places and at prescribed times and for prescribed durations. In contrast to the organizational thrust from the discrete to the continuous that characterizes so many other areas of contemporary human activity, the academy has remained materially discrete in much of its organization and in much of its outlook. And not without reason: There is comfort, security, and predictability to be found in this discreteness. These qualities are manifest internally in many ways (e.g., traditional class schedules, office hours, and semesters); but they are manifest externally as well in fashions that encourage universities to be resistant to change. Accrediting agencies, governmental agencies, and other external bodies important to the academy measure and evaluate its activities in ways that provide material disincentives to change. "Seat time" in class, for example, is arguably more important with regard to governmental monitoring of the effective use of student financial aid than is evidence of actual learning; "graduation rates" -- defined in ways which might measure the institutional effectiveness in an isolated residential college of the 1930's but which have little relationship to the educational needs of a mobile population in the "continuous society" of the late 20th Century -- provide incentives for institutions to serve traditional, self-contained student populations and disincentives to serve the needs of part-time students, transfer students, and adult learners.

Indeed, it can be argued credibly that much of public policy with respect to higher education can now be characterized in terms of a model that is precisely the opposite of that

which is needed for the university of the 21st Century -- a model that attempts to impose a discrete paradigm upon an emerging continuous reality. At its worst, that model still sees discrete populations with discrete tasks to be performed at discrete times. It sees a population divided into elementary/secondary students, traditional college students, adult earners, and retirees -- each with a discrete role to play in society and each with a discrete relationship to higher education. And it sees the college students in this model as being served by discrete courses taught in discrete semesters composed of discrete class periods. But the reality is that these are not discrete populations. university of the 21st Century -- which is, in effect, the university of the continuous society that it serves -- is a university to which such classifications are unimportant if not meaningless. The public school student may well be simultaneously a student of the university, and the university student may well be a teacher in the public school. The individual who at an earlier time would have been a traditional college student is now statistically more likely than not to be employed full- or part-time and pursuing a college education over a period of eight or 10 years at two or three different institutions. In general, just as the continuous society renders it possible (and then essential) to conduct bank transactions at the automatic teller at any hour of the day or night, so also does it render it possible (and then essential) to provide access to higher education throughout a lifetime, throughout a calendar year, and from times and places that may be remote from the physical facilities and hours of operation of the university campus.

It is into this context that the continuous university emerges, and it is the continuous university that Christopher Newport University is becoming. The continuous university

is both a philosophic framework and a practical model for public higher education in the 21st Century. The philosophic framework recognizes the continuity of the nature of the clientele to be served, the continuity of the nature of effective responses to its. needs, and the continuous nature of the society of which it -- and the University -are a part. The practical model, in effect, derives not from asking how the needs of the clientele can be accommodated to the nature of the University but rather from asking how the nature of the University can be accommodated to the needs of the clientele. In such a model, the traditional conventions of academic operation survive only to the extent that they are consistent with these needs; and they adapt and change to whatever extent is required to accommodate them. The symptoms of such change are felt throughout the University, and they include academic activity that progresses around the clock and throughout the year -oftentimes independent of considerations of time and location of students, faculty, and staff.

The University recognizes that such a transformation requires that resources be (re)allocated in a fashion consistent with this evolution and that university operating structures and protocols be adapted accordingly. The present restructuring plan sets forth essential next steps in the necessary evolution. It contains commitments to redeploy salaried faculty and to restructure the academic year in ways that make higher education at Christopher Newport University a year-round enterprise aimed at serving a student clientele and a dynamic region of the Commonwealth with year-round needs for such service. It contains cost-effective and pedagogically-sound innovations for the use of electronic technology both in the didactic process (e.g., CNU On-Line) and in economic development (e.g., SEVAnet). It contains initiatives to streamline and render more efficient administrative processes and student services and to reinvest the resulting savings in development activities conducive to the evolution of the continuous university. It contains initiatives in the area of curricular reform that establish appropriate goals for undergraduate general education and that set forth means for achieving these goals and for assessing how well the job has been accomplished. It contains initiatives for rendering the curriculum more effective and more efficient. It is also a plan that addresses each of the five objectives of the Virginia General Assembly and each of the 14 related criteria which support these objectives -- and which contains commitments to provide incentives conducive to these ends. It is, in sum, a plan that changes the University in significant ways and that lays the groundwork for subsequent change as well.

In the midst of change it is important to recognize also that which remains constant; and it is therefore important to note in this preface the continuing commitment of the University to liberal learning in undergraduate education. The importance of liberal learning in the continuous society (and, hence, in the continuous university) is not only undiminished but, in fact, magnified. Historically the learning of the liberi (free men) and, literally, learning that is based on books, liberal learning remains the intellectual anchor of the undergraduate experience in the continuous university. Just as the continuous society is a society characterized by heretofore (and presently) unimagined opportunities, it is also a society filled with heretofore (and presently) unimagined threats -- including threats to economic well-being, individual liberty, and human The commitment of Christofulfillment. pher Newport University to liberal learning in such a context is therefore correspondingly greater, for the liberally-educated citizen is the citizen who is prepared to recognize and capitalize upon the opportunities of the continuous society and who is prepared to recognize and surmount its threats. The nature of access to such learning, the nature of its (inter)disciplinary organization, and the nature of its related delivery systems and formats may be significantly different in the future from what they have been in the past, but the central nature and importance of liberal learning to the continuous university and to the continuous society it serves will be greater than ever before.

Learning also defines the roles of faculty in the continuous university. Much has been written and spoken about the need for teaching to be paramount in the activities of faculty; but in the context of an institutional mission that embraces the "discovery, interpretation, dissemination, and application of knowledge," it is not teaching -- but learning -- that is the centerpiece of the academic enterprise. This is a distinction that is substantive and not in any sense merely semantic. To see both its substance and its truth, one need only ask which of the two activities makes sense in the absence of the other: Teaching exists solely for the purpose of fostering learning, and it is therefore subordinate to learning in the hierarchy of academic importance. Teaching that takes place in the absence of learning is essentially a contradiction in terms; a pointless activity; a waste of both human and fiscal resources. But learning that takes place in the absence of teaching is not only possible but ubiquitous in the continuous society. Indeed, one of the most precious gifts that a university can give to its students and to the society in which they live is the capacity for them to continue as learners long after their formal association with teachers has ended.

In the life of the continuous university itself. learning is the broad common ground that both students and faculty share. Only a faculty that has sustained its own commitment to learning in the form academically-recognized scholarship is a faculty that has sustained its academic legitimacy -- with students and with the public at large. And only such a faculty can adequately discharge its responsibilities to the Commonwealth in supporting the university's ability to contribute to the economic, social, political, cultural, and scientific development of the society it serves. The artificial dichotomy that views "teaching" and "research" as discrete, competing activities has no place in the continuous university; for in this environment each is an omnipresent and integral component of the continuous whole of learning. The dynamics of the "discovery, interpretation, dissemination, and application of knowledge" require, by their nature, continuous and mutually-reinforcing interaction. Lest it jeopardize the health of all, the continuous university must safeguard the health of each. Christopher Newport University will provide for such safeguards.

While the plan that follows does involve some consolidation of courses and concentrations, it does not contain proposals for diminishing academic offerings appropriate to serving the University's clientele. Indeed, it is not in any sense a plan for shrinkage. As the University nears the time when it will expand into the Ferguson High School property, the plan lays the foundation for it to do its part in the accommodation of enrollment growth. That is a time in which Christopher Newport University must reach its full potential as both an undergraduate and graduate degree-granting institution in the arts and sciences and in those professional areas consistent with its mission.

The plan that follows is organized around the five objectives identified by the Virginia General Assembly in its 1994 session and, categorized by "primary objective," 27 numbered strategies and actions are identified and discussed. For each strategy, this discussion includes reference to "secondary objectives" as well as reference to related criteria. There is, of course, a strong order of interdependence between and among the five objectives and the several strategies, and the University appreciates the irony of this circumstance as it reflects upon the inadequacy of the report's discrete organization to accommodate what is fundamentally a continuous plan. Finally, for the ready reference of the reader, the plan contains a matrix relating objectives, strategies, and criteria, as well as several other "annexes" that were deemed sufficiently important to

the message of the plan as to warrant inclusion in their entirety.

Christopher Newport University looks forward to translating this plan into reality, to responding in a continuous context to the needs of a continuous society for higher education, and thereby to emerging as the first truly continuous university in the Commonwealth. Christopher Newport University also looks forward to fulfilling this mission with the support of the Commonwealth, its interested central agencies, and its people. The work of the University remains the "discovery, interpretation, dissemination, and application of knowledge;" and the future will see this work done more efficiently, more effectively, and more in keeping with the continuous nature of the society that the continuous university exists to serve.

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Planning and Implementation of the Restructuring Effort

The University is actively integrating the restructuring effort with the process of planning, evaluation and assessment. Although the submission schedule for this plan has limited the number of participants in the first phase of the process to the President and his Executive Planning Council, the next phase will significantly broaden the level of involvement. The specific steps to accomplish this integration with broadbased participation are described later in this document; but it is important first to describe the organizational structure that will support this effort, for it represents a restructuring effort already under way at the University.

Historical Context

In 1991, the President of the University created the Strategic Planning and Evaluation Council (SPEC), a body that was to report directly to the President and which was charged with the responsibility of overseeing and coordinating the institution's efforts in planning and institutional effectiveness. In his charge to the Council's first members, the President noted:

As a permanent standing committee, the Council is designed to provide a vehicle for broad-based, continuous strategic planning and evaluation for institutional effectiveness. In contra-distinction to other committees concerned primarily with tactical procedures to achieve long-range goals, the need fulfilled by the Council specifically relates to strategic as opposed to tactical planning. The Council's role conspicuously includes the evaluation of attainment of educational goals

within the full scope of institutional planning, and involves institutional research activities and assessment of student outcomes in support of these activities.

In spring, 1992, SPEC intensified its work on the revision of the University mission statement and statement of goals, and the resulting statements were approved by the Board of Visitors of the University in December, 1993. Following that action, SPEC took University-wide initiatives aimed at the creation of coherent strategic planning documents for the various units of the institution, and those initiatives will result in formal mission statements and strategic plans for each such unit coming into being before the end of the 1994-1995 academic year. In August, 1992, SPEC devised and. proposed a two-year planning and evaluation cycle for use by the University, but the practical utility of that document has proved wanting and it has not been meaningfully internalized in the actual planning and budgeting processes of the University. While the University has for 12 years maintained and conducted an organized and effective system of academic program review and has for four years had a full-time director of student assessment, these processes have not become part of the "broadbased, continuous strategic planning and evaluation for institutional effectiveness" that was envisioned by the President at the time of the creation of SPEC.

On May 27, 1994, the President of the University appointed a small task force and charged this body with the responsibility of recommending such changes as might be necessary to establish adequate procedures for planning and evaluation. That process

culminated on August 11, 1994, at which time the President directed a major restructuring of the institutional effectiveness functions of the University (Annex Five) effective September 1, 1994, this directive:

- dissolves the Office of Planning and Budget and the Office of Student Assessment. It establishes an Office of Institutional Effectiveness and vests in that office administrative responsibility for the coordination and execution of the University's planning process. The office links planning, budgeting, assessment and evaluation, and institutional research activities in the comprehensive context of improving institutional effectiveness.
- abolishes the present Strategic Planning and Evaluation Council.

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 creates two new collegial bodies and charges each with clearly-defined responsibilities regarding institutional effectiveness. These are the Executive Planning Council and the Budget Advisory Committee for University Planning. The Council reports to the President and is responsible for developing the strategic vision for the University, focusing the vision, and then providing the process for implementing the vision -- including the review and approval of mechanisms for monitoring institutional effectiveness. The Council defines and conducts the strategic planning process for the University. The Committee advises the Executive Planning Council on matters pertaining to strategic planning and advises the Office of Institutional Effectiveness on matters pertaining to institutional effectiveness -- including operational planning, budget, evaluation, and institutional research.

establishes a biennial calendar for the orderly conduct of the University's processes in strategic planning, operational planning, resource allocation, and assessment and evaluation, and specifies the role of the President and Board of Visitors, the Executive Planning Council, the Budget Advisory Committee for University Planning, and the Office of Institutional Effectiveness in each phase of the process. The University's planning calendar is designed to complement the Commonwealth's biennial calendar.

The Executive Planning Council comprises the Provost (chairman), the President of the Faculty Senate, the President of the Student Government Association, the Vice President for Administration and Finance, the Vice President for Student Services, the Vice President for Development, and the Associate Vice President for Institutional Effectiveness.

The Budget Advisory Committee for University Planning comprises the Associate Vice President for Institutional Effectiveness (chairman), the four college deans, the Dean of Academic Support, the Dean of Admissions, two members of the instructional faculty, one member of the student body, and one representative each from the jurisdictions of the Vice President for Administration and Finance, the Vice President for Student Services, the Vice President for Development, and from the division of auxiliary enterprises.

The creation of a unified, synergistic Office of Institutional Effectiveness that includes budget development, assessment and evaluation, and institutional research provides not only administrative focus but also institutional visibility for the overall institutional effectiveness function. The creation of the Executive Planning Council, chaired by the Provost of the University, places responsibility for the strategic planning function at the highest levels of institutional responsibility under the President; and the designation of the Budget Advisory Committee for University Planning as advisory to the Office of Institutional Effectiveness links the collegial and administrative arms of the institutional effectiveness function. In sum, the new structure creates a continuous planning model appropriate to the needs of the continuous university.

Integration of Restructuring Plan with the Strategic Planning Process

As described in the preceding section, the University is actively engaged in the development of a strategic planning process that involves all components of the University community. Each strategy and action in the restructuring plan is assigned to a standing faculty committee, an *ad hoc* committee or an administrative office. The assigned committee or office has direct responsibility for the full development, implementation

and evaluation of the specific strategy and action. The Office of Institutional Effectiveness will assist in the development of detailed measurement instruments for each strategy and action.

The Budget Advisory Committee for University Planning coordinates the development of specific goals, objectives, and methods of evaluation at the committee, department, or division level. Consistent with this process, the Budget Advisory Committee for University Planning will coordinate and monitor each restructuring strategy and action.

The advisory committee will report regularly to the Executive Planning Council on the progress and effectiveness of the implementation of each restructuring strategy and action -- and will advise the council relative to changes that are indicated. The council will then incorporate such changes as it deems appropriate into the next update of the University's strategic plan and will forward the resulting document to the President for his consideration and approval.

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-GENERAL BACKGROUND-

The University currently has a full-time, salaried teaching/research faculty of 174 individuals, and, of this number, 167.41 FTE are budgeted in fiscal 1995 to the program of instruction. This full-time faculty is complemented by a well-qualified part-time and adjunct (wage) faculty that comprises more than 100 individuals and is budgeted in the 1994-1995 academic year at 24.98 FTE. As recently as fiscal 1992, 29.3% of E&G-budgeted FTE faculty for actual classroom instruction in the academic year consisted of wage faculty. Through funding provided by the Governor and the General Assembly, the corresponding figure for the 1994-1995 academic year has been. reduced to 17.0%. The initiative to improve the ratio of full-time faculty positions to part-time faculty positions has improved the statistical composition of the full-time faculty as well. Tenured faculty now represent only 45% of the full-time, salaried teaching/research faculty. Perhaps most significant is the fact that slightly more than half of the full-time faculty have been at the University less than five years. Overall, this faculty is exceptionally well-qualified. Eighty-three percent hold terminal degrees. In sum, the faculty is a young, vital, and productive cadre of distinguished teacherscholars who are prepared to be the stewards of the evolution of the continuous university. One of the University's major challenges in the years ahead is to assure that the wealth of talent represented by this faculty is used to its fullest possible potential in this evolution.

Full-time teaching and research appointments presently provide for a full ninemonth (academic year) session at the Uni-

This appointment period is based on the traditional academic calendar that includes a fall and spring semester. In fact, the Consolidated Salary Authorization for Faculty Positions in Institutions of Higher Education, 1994-95 specifies that "Faculty" who are paid for summer employment should receive a salary which is proportionately equal to their academic year rate." But the needs of the continuous university require that the University review the "timing" of these contractual commitments and provide for broader options. Faculty utilization, facility utilization, course-scheduling, and faculty research efforts can be both enhanced and made more supportive of the University's evolving mission if contractual teaching options are expanded appropriately.

The faculty development program at the University is designed to improve instructional effectiveness and promote the professional development of faculty members. The University engages in a wide variety of faculty development activities which are supported from a variety of limited fund Private contributions support sources. activities related to professional development, instructional development, and dissertation grants. These activities expand the academic expertise of faculty members, increase teaching effectiveness, and improve course content. Additionally, they may offset the expenses incurred in preparing doctoral dissertations. The Educational and General Program budget sabbatical leaves so that faculty may extend their teaching abilities and continue their professional and intellectual growth. The activities are intended to result in improved teaching effectiveness, enhanced research and/or artistic activity, new capacity for

service to the University or community, and advanced degrees that permit teaching in a new area. Resources within the Educational and General Program budget are also reallocated to support the retraining of faculty during periods in which the University must undergo curricular change to meet student : needs within the context of limited resources. Provisions will be made to provide faculty training in the use of classroom computer technology. Faculty members are also encouraged to seek support for professional development from sources outside the University such as federal agencies, state and local governmental agencies, nonprofit foundations and agencies, or businesses and industries. The Office of Sponsored Programs assists in these efforts by gathering information about grant sources and providing guidance in the preparation of proposals. Indirect cost recoveries resulting from sponsored research activity also support faculty research and development.

The University will undertake restructuring initiatives that will permit it to more fully capitalize on the strengths of its faculty. These opportunities include changes in the timing of teaching commitments, the scope and foci of faculty development and training activities, and in sponsored research.

STRATEGIES AND ACTIONS —

Increase flexibility in the "timing" of faculty teaching commitments during the calendar year.

Responsibility: Provost

Timetable: Full implementation by the end of the 1994-1996 biennium

Measurement: Measurement activity will include monitoring changing levels of salaried faculty participation in summer teaching, levels of increased faculty scholarly productivity, levels of student enrollments in summer sessions, and the impact of such enrollments on average time required by full-time students to complete degrees.

Secondary Objectives: Objective 3: To minimize administrative and instructional costs; Objective 4: To prepare for the demands of enrollment increases

Summary

This strategy will generate \$249,428 in savings by eliminating traditional summer wage compensation for full-time, salaried faculty teaching in summer school and conducting this instruction with (a) fulltime faculty teaching in summer as part of their regular salaried teaching duties, and (b) adjunct instruction compensated at adjunct rates. It will enhance academic quality, consistent with the model of the continuous university, by having full-time, salaried faculty discharging their teaching and non-teaching obligations to the University in the summer sessions as well as in the academic year. It will reinvest the savings thus generated by creating six additional full-time, salaried faculty positions, thereby increasing the size of the full-time, salaried faculty by three and It will increase the one-half percent. budgeted dependence of the University on adjunct instruction from 13.6% to 21.0% -- a level still materially less than the nearly 30% that materialized in the peak (fiscal) year of 1989. It will minimize any adverse effects of this increased dependence on adjunct faculty by spreading the utilization of such faculty uniformly throughout the calendar year, rather than

concentrating it in the fall and spring semesters.

Discussion

Present full-time faculty appointments at Christopher Newport University are for less than nine months' duration each fiscal year. In many senses, however, the relationship of the faculty to the University transcends the temporal bounds of the academic year. Salary payments are made 12 months each year; service on certain faculty committees is required in the summer as well as in the academic year; the relationship of faculty members to their advisees continues throughout the summer; and certainly the tenured employment relationship of tenured faculty to the University is continuous -- unbroken by the summer months.

Summer is for many faculty the time when the scholarly dimension of their professional lives is most fully cultivated. Unlike many "research institutions," teaching is now (and has always been) the primary responsibility of Christopher Newport University faculty. In reference to rewards and incentives to guide faculty behavior (criterion 10), the University Handbook states:

The criteria for retention, promotion, and tenure are teaching, professional development, and service. At Christopher Newport University the first, teaching, is of paramount importance, and poor teaching cannot be redeemed by superiority in the other two areas.

During the academic year, this priority is reflected in a typical division of professional responsibilities for faculty that is 80% teaching and 20% professional development and service. It is in the summer months when -- on their own time and in the ab-

sence of structured, salaried commitments to the University -- the faculty of the University can focus on their professional development, including research and other forms of scholarship. Yet scholarship is an essential ingredient of the academic life of a professor; and as Christopher Newport University becomes more heavily involved in education at the master's level, the importance of scholarship increases correspondingly. The present traditional protocols for the deployment of faculty at Christopher Newport University materially confine a professor's scholarly time to a period of the fiscal year when the individual has no formal, contractual, salaried relationship to the institution. Such protocols are clearly at variance with the ideal (discussed in the preface to this document) of teaching and scholarship being integrated and mutually-supportive threads of the fabric of learning in the continuous university.

At the same time, the University conducts a significant portion of its instruction in summer school; and considerations of increasing retention and graduation rates (criterion 10) and partnerships with the public schools (criterion 13) -- the latter with special reference to the graduate education of in-service teachers -- militate in favor of this commitment to summer instruction becoming more extensive still. In short, the nature of the continuous university requires that these protocols be altered so as to permit the "teaching" component of a faculty member's annual salaried employment to take place in the summer as well as in the traditional academic year. This is fundamentally different from the way full-time faculty presently teach in summer school. That teaching now takes place in addition to their salaried employment, is independently compensated, and consumes time and energy that is therefore not committed to professional development or service.

The University will, by the end of the present biennium, shift as much as 10% of the salaried teaching commitment of teaching and research faculty from the traditional academic year into the summer session. This program will be *voluntary* in nature on the part of salaried faculty; but the common interests of the University and its faculty will be such that sufficient numbers of faculty will participate on a voluntary basis so as to make this goal achievable. Participating faculty will have the option of confining their 24 LHE teaching obligation to the fall and spring semesters as is presently the case, or of spreading it over fall/spring/summer, or of confining it to fall/summer or to spring/summer.

[NOTE: LHE = "lecture hour equivalent," the unit of measure of faculty teaching load. 24 LHE's of teaching activity consists of 24 semester hours of traditional classroom lec-

ture, or its equivalent in -- or in combination with -- laboratory instruction, internship supervision, etc.]

The addition of "subsemesters" in the academic year schedule [cf. objective 4, strategy 25] increases the number of options to a greater extent still.

The economics of this plan are compelling. Traditional summer teaching on the part of salaried faculty (identified in the following tables by "TST/SF") not only detracts from the full cultivation of the professional development of faculty (including their scholarly development), but it is also expensive for the University compared to the cost of other wage instruction, especially adjunct instruction. An examination of the distribution of budgeted LHE's of instruction at Christopher Newport University for FY95 is summarized in table one.

Table One

Budgeted LHE's of Instruction By Term and Appointment Status (Actual -- 1994-1995 Fiscal Year)

Term	Salaried	TST/SF	Adjunct	Part Time	TOTAL
Fall	1835	0	408	40	2283
Spring	1835	0	262	40	2137
Summer	0	508	0	0	508
TOTAL	3670	508	670	80	4928

Were the 10% shift in effect for this same period -- that is, if 10% of the actual salaried instruction by salaried faculty were taking place in summer school -- this table would take on the appearance of table two.

Table Two

Budgeted LHE's of Instruction By Term and Appointment Status (FY 1994-1995 with a 10% Shift)

Term	Salaried	TST/SF	Adjunct	Part Time	TOTAL
Fall	1652	0	591	40	2283
Spring	1652	0	445	40	2137
Summer	366	0	142	. 0	508
TOTAL	3670	0	1178	. 80	4928

The financial implications of this change are significant. In the present fiscal year, traditional summer teaching by salaried faculty will cost, on average, \$1,048 in wages and FICA per LHE of activity. Adjunct instruction, on the other hand, will cost, on average, \$557 per LHE of activity. With a shift of 508 LHE's of instructional activity from the former category to the latter, an annual savings of \$249,428 is realized. The change increases the dependence of the institution on adjunct faculty and, in fact, increases the

portion of instruction budgeted to be conducted by adjunct faculty from 13.6% to 23.9% over the course of the fiscal year. But that increase can be offset by using this savings (and the \$80,208 resultant savings from unneeded wage instruction) to recruit and employ six additional full-time salaried faculty. Once that is done, the table takes on the appearance of table three; and the overall fiscal year dependence on adjunct faculty falls to 21.0%.

Table Three

Budgeted LHE's of Instruction
By Term and Appointment Status

(FY 1994-1995 with 10% Shift and Savings Reinvested in Salaried Faculty)

Term	Salaried	TST/SF	Adjunct	Part Time	TOTAL
Fall	1717	0	526	40	2283
Spring	1717	0	380	40	2137
Summer	380	Ò	128	Ó	508
TOTAL	3814	0	1034	80	4928

For the first time in the history of the University there will be a corps of teaching and research faculty in residence and fulfilling their salaried employment obligations yearround. That means that the academic processes of the University will continue yearround. It means, in particular, that faculty advisers will be present in the summer, as part of their salaried responsibilities, to assist students. It means that the University's program of summer offerings can be more responsive to the needs of students attempting to accelerate their time to graduation because a cadre of full-time salaried faculty will be present to conduct such offerings as a part of its salaried relationship to the University. It means, in sum, that an essential step in bringing the continuous university into being has been taken.

Full implementation of this action (i.e., full implementation of the 10% shift described above) by the end of the present biennium will accomplish the following objectives:

- incorporate the summer session into the "full-service" time of University operation;
- expand the options available to students in accelerating their programs of study and expand the options available to faculty in discharging their salaried teaching commitments to the University;
- permit the academic processes of the University to function on a year- round, continuous basis;
- reduce the direct costs of conducting 10% of the institution's total instructional program by nearly \$250,000 and permit the reinvestment of such savings in the instructional program itself;

- increase incentives for sponsored activity on the part of full-time salaried faculty, and
- diminish incentives for salaried faculty to teach for additional compensation beyond the annual 24 LHE's required by their salaried commitment.

This activity addresses criteria 1, 2, 3, 4, 5, 6, 9, 10, 12, 13. In particular, as has been discussed above, the activity will enhance the potential of the University's teacher education program to effect partnerships with public schools (criterion 13), and it has the clear potential to increase retention and graduation rates (criterion 10). Because it takes explicit cognizance of the professional development of faculty being a year-round activity and provides for the conduct of that . activity at times that may, for some, be more conducive to its full cultivation than the summer months, it also enhances the University's commitment to faculty and staff development (criterion 4). The University will make rewards and incentives to guide faculty behavior (criterion 9) an integral part of it as well. The University therefore will make faculty participation in a yearround University a priority in its ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the academic deans and the provost in their recommendations and decisions on such matters.

Restructure the University's traditional faculty development efforts.

Responsibility: Provost; Dean of Academic Support

Timetable: Recommendations to the Budget Advisory Committee for University Planning in FY95; implementation in FY96

Measurement: Traditional faculty development grant applications and applications for sabbatical leave will be screened at all levels for clear statements of consistency with institutional mission and clear statements of how, precisely, the award is intended to benefit the Commonwealth, the University, and the individual faculty member. Eligibility of recipients for subsequent awards will be made contingent upon demonstration that the objectives of previous awards have been met. The effectiveness of the structured training programs in the use of technology in instruction will include measurements of participant reactions, learning, and self-assessment of use of training after the workshop or training option. These evaluations will be used to improve future offerings. Faculty and staff completing the workshops in technology use and large-lecture multimedia will be surveved three to six months after completion of the workshop to determine if they are using the information presented in the training. By the end of FY96, at least 50% of the faculty will have received four or more hours of training in technology and largelecture multi-media use. By the end of FY97, 100% of the faculty will have received four or more hours of such training.

Secondary Objectives: Objective 2: To ensure the effectiveness of academic offerings; Objective 4: To prepare for the demands of enrollment increases

Discussion

In light of strong commitments rendered elsewhere in this document which address faculty and staff development (criterion 4), and in light of the University's existing

plans for the creation of a Faculty Development Laboratory (Annex Nine), it is clear that these changes will make the University's programs of faculty training, faculty development grants, released time, sabbatical leave, and sponsored research supportive of the ends of restructuring efforts. The University Handbook will be revised accordingly. These changes will commit both faculty and administration to assign priority to proposals for faculty development grants, released time, sabbatical leave, and sponsored research grants to those proposals that have the potential to:

- effect long-term changes in the deployment of faculty;
- ensure the effectiveness of academic offerings;
- minimize administrative and instructional costs;
- prepare for the demands of enrollment increases; and
- address funding priorities as approved by the General Assembly.

The University will also reallocate dollar savings from other strategies noted in this document (e.g., objective 3, strategy 16) in amounts not less than \$100,000 annually to expand its program of faculty development and training in a fashion consistent with this commitment.

The University has already recognized and provided for a structured program of faculty training in the use of technology in instruction. The reader is referred to Annex Nine (Technology Integration) for a fuller discussion of this initiative. However, the central thrust of the technology integration initiative -- and the central commitment of the

University in this new departure in its program of faculty development -- is captured in the following excerpt from Annex Nine:

Historically at CNU, modest resources have supported "traditional" faculty development efforts such as workshops, sabbaticals, and discipline-related efforts. To make substantial changes in the use of technology in the instructional arena, the University must direct its attention to faculty development efforts and improve the resources and support services that encourage faculty experimentation and technology transfer.

As part of its continuing efforts toward technology integration, the University will establish a training program for faculty development in computer and classroom technology. The primary goal of this training program is to offer opportunities to all faculty and staff to become more proficient in the use of technology in the instructional context. Formal workshops of two-to-fourhours on different technology topics will be offered on a scheduled basis, with course offerings being repeated during the year. Faculty already proficient in areas of integrated technology in the classroom and appropriately-qualified personnel in the academic support division of the University will serve as trainers. Training topics will include the use of:

- multimedia authoring tools;
- computing software;
- library electronic bibliographic and fulltext databases;
- electronic classrooms;
- Internet:
- electronic bulletin boards;

- technology such as "class talk" in enhancing the quality of learning in a large-lecture environment; and,
- e-mail.

Short workshops, scheduled at varying times of the day, will be offered to facilitate faculty and staff use of training. In addition, some training programs will be videotaped and these tapes made available to faculty and staff for individual use. Documentation supporting the use of the different technologies and workshop handouts will be shared with both participants and prospective participants in the program.

Using in-house trainers and in-house-developed training materials rather than private training enterprises will substantially reduce the cost of the training program. Assuming a training instructor fee of \$100 per contact hour for up to 20 trainees, the cost of training 100 faculty and staff members for eight hours of training (the equivalent of two workshops) would be \$4,000. **Training** materials could average more than \$20 per person, per workshop, a cost of \$4,000 or more. In-house trainers will not be paid the trainer fee and the only materials cost will be the duplicating fees, saving approximately \$7,800. The cost avoidance for eight hours of training for each faculty member and academic secretary (approximately 200 trainees) will be \$15,600. The cost avoidance is greater when compared to having training done off campus. Assuming an offcampus rate of \$250 per person, per day equates to a cost avoidance of \$50,000 per year.

Faculty development and training activities consistent with the introduction of new teaching techniques (criterion 8), incorporating telecommunications and computer technology into teaching and learning (criterion 11), and accommodating enrollment

increases (criterion 6) are already under way. Further discussion of some of these efforts can be found under objective 2, strategy 8 (CNU On-Line) and under objective 2, strategy 11 (large-lecture techniques) in this document. In addition to these, the College of Science and Technology has this year initiated a program in which selected faculty have been provided the time and equipment necessary to develop software and other means for using both laptop and palmtop computers and related projection systems in the conduct of large-lecture sections in the sciences. This is faculty development activity of a kind that has direct, positive implications for the improvements of the instructional program.

The three other areas addressed in this document that will also require faculty development and training activities are briefly summarized here with a cross-reference to the strategy in which they are discussed.

- Implementing discipline-specific foreign language requirements (objective 2, strategy 10) will require retraining of a minimum of five faculty (one in German, one in French, and three in Spanish) over the course of three years. Because of lack of knowledge of technical vocabulary used in a subject area (e.g., business) the faculty will require additional training. This training will be off-site at a summer institute lasting four to six weeks. The estimated cost is \$5,000 per faculty member, with a total cost of \$25,000.
- Restructuring the traditional format of "hands-on" laboratory instruction for introductory science courses (objective 2, strategy 9) will require training 20 faculty the first full year of implementation and five each year thereafter. The

program will require 16 hours of training before the faculty member teaches, the laboratory sections and weekly one. hour sessions throughout the semester. Faculty in the pilot program will teach new faculty who, in turn, will train other faculty. The actual costs of the training program will be for materials used to train and not for trainer fees. Specifics of the training program include the role of simulation in modern research, use of specific simulation tools, effective ways of incorporating computer simulations and analysis into self-paced and self-guided laboratory units, and case studies. of such laboratory programs at other universities.

Staffing CNU On-Line courses for the next three years (objective 2, strategy 8) will require 40 trained faculty. Total formal training hours per faculty member will be 14 hours. Each faculty member will be trained by previously-trained faculty, avoiding the expense of professional trainers. Training will include the use of applicable software; development of course modules that will include spreadsheets and data analysis techniques, statistics packages, multimedia, CD ROMs, simulation, Internet, critical thinking, technical writing, small group management, conflict negotiation and resolution, teaching criteria-referenced reading, and problem-solving based pedagogy; design of interactive course formats, including message connectivity, dialogue pattern, concise communication, elucidation of conceptual frameworks, and divergent and convergent message content; and, design and execution of testing instruments that will include student learning styles, pre- and post-module tests, and certification of learning outcomes.

This strategy addresses or has the potential to address criteria 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. In particular, while its primary focus is on faculty and staff development (criterion 4) it will also incorporate elements that address rewards and incentives to guide faculty behavior (criterion 9). Accordingly, the University will recognize participation in a revised program of faculty development and training in its considerations of faculty candidacies for retention, promotion, and tenure, as well as in its considerations of awarding merit pay. Explicit cognizance of these priorities will be taken by the academic deans and the provost in their recommendations and decisions on such matters.

3 Staff the Office of Sponsored Programs to support the needs of the University.

Responsibility: Dean of Academic Support

Timetable: Recommendations to the Budget Advisory Committee for University Planning in FY95

Measurement: Measurements such as the ratios of successful to unsuccessful grant applications, ratios of annual expenditures of sponsored program dollars to annual expenditures of the office of sponsored programs itself, and ratios of annual expenditures of sponsored program dollars to full-time teaching/research faculty employed will be established and monitored.

Secondary Objective: Objective 5: To address funding priorities as approved by the General Assembly

Discussion

As Christopher Newport University becomes more heavily committed to activity at the graduate student level and to the support of research on the part of its faculty, the Office of Sponsored Programs (OSP) must grow correspondingly to support this effort. At present, the office is staffed by one halftime director compensated from faculty wages (object of expenditure code 1145) and is supported by one student assistant. This is the same level of support that existed in FY90, during which year OSP generated eight new grant awards of total value \$365,829 and administered annual research expenditures of \$320,763. By contrast, in FY93, OSP generated 33 new grant awards of total value \$1,474,272 and administered annual research expenditures of \$529,979. Indirect cost recoveries from grant awards available for the use of the University in FY95 amount to approximately \$150,000. OSP is generating four times the volume that it generated in FY90. The potential for more grant activity is left untapped due to the lack of personnel.

Current sponsored programs are diverse and highly consistent with the objectives and criteria of this restructuring. The University is heavily involved in applied research in the hard sciences in connection with NASA, CEBAF, the Office of Naval Research, and the National Science Foundation. Sponsored program activity includes partnerships with the public schools (criterion 13) through such efforts as the nationally-recognized GAMES ("Girls and Mathematics Equals Success") project, the V-QUEST STARS project, and a significant Eisenhower grant which deals with teachers as researchers. But sponsored programs also include operation of the Newport News Tourism Bureau -- an integral part of the institution's academic offerings in leisure

studies, recreation, and tourism that operates under a \$200,000 annual grant from the City of Newport News and constitutes both an economic development initiative and a partnership with local government (criterion 14).

An activity so central to the mission of the continuous university must be staffed in a fashion that is adequate to fulfill its role in that mission. Accordingly, the University is now identifying such expansion as is appropriate to this office and will reallocate resources saved from other aspects of the presently-proposed restructuring objective 3; strategy 16) to accomplish this This activity involves the Dean of Academic Support (in which jurisdiction OSP is housed) and present faculty and staff who are key participants in the University's programs of sponsored research. While the precise nature and magnitude of this reallocation cannot yet be specified with precision, it seems inescapable that it will include the assignment of at least one fulltime, salaried position to this essential and increasingly productive activity.

Increasing the size of this office will better serve the University through more time allocated to identification of grant opportunities for faculty and students, preparation of grant applications, and administration of grant monies. Grants can provide equipment and research opportunities for students, otherwise unavailable through traditional funding. As OSP increases its activities, the University should see a corresponding increase in grant-related activity that involves undergraduate and graduate students. Students will gain research experience, have access to data to write senior-level papers, and have the opportunity to design independent research projects. In addition, an effective grants office is an effective tool in faculty recruitment and retention. Growth in the OSP will make it easier for faculty to get support for their research.

This activity addresses criteria 1, 2, 3, 4, 5, 9, 13, 14. In particular, faculty and staff development (criterion 4) and partnerships with public schools (criterion 13) are key beneficiaries of the work of OSP; and this strategy will help assure that OSP has the wherewithal to keep pace with such requirements. The University assures that faculty who take full advantage of sponsored research activity are given appropriate priority in rewards and incentives (criterion 9) associated with its ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. **Explicit** cognizance of these priorities will be taken by the deans and the provost in their recommendations and decisions on such matters.

Objective Two: To Ensure the Effectiveness of Academic Offerings

-GENERAL BACKGROUND-

Christopher Newport University has a long history and tradition of building baccalaureate degree programs on a strong core of liberal learning. This core of learning now comprises approximately half of the minimum number of hours required for a baccalaureate degree. It includes one-year requirements in rhetoric and composition, mathematics, foreign language, and natural science, as well as two-year requirements in both the humanities and the social sciences. Students pursuing BA degrees must complete a second year of work in the same foreign language that was used for the first year, while those pursuing BS degrees must complete a second year of work in a natural science other than that which was used to complete the first year.

While this extensive set of general education requirements is widely believed to be effective in accomplishing its goals, this effectiveness has proved difficult to assess in systematic, quantitative terms. The extensive nature of these requirements has been, in part, responsible for driving the total number of semester hours required to complete certain degree programs beyond the minimum 122 required for all baccalaureate degrees. Moreover, while employers often praise the merits of liberal education in the abstract, their hiring practices and job-specific commentaries clearly place a much higher value on specialized knowledge and practical workplace experience. Mindful of these conflicting but coexisting values and priorities, in April, 1994, the University initiated a comprehensive review of its general education requirements. That review was conducted during the summer of

1994 by a task force appointed by the Provost at the request of the Undergraduate Curriculum Committee (UCC). The task force reported to the UCC on August 31, 1994; and final revisions in the general education requirements will be approved prior to January 31, 1995. Once the restructuring of the general education requirements is complete, academic departments will undertake to examine such restructuring as is appropriate for major field requirements. This latter activity will focus on the "practical" aspects of the major, with special reference to the role of internship activity and cooperative education in the baccalaureate programs at Christopher Newport University. These initiatives are addressed in strategies four through seven below.

Of equal importance to the structure of the baccalaureate degree, however, is the nature of the delivery of undergraduate instruction. Perhaps the most innovative effort under way at Christopher Newport University in this regard is the program known as CNU On-Line. After four years of experimentation at CNU with the electronic bulletin board as a medium of instruction, the General Assembly appropriated some \$400,000 to CNU for the 1994-1996 biennium to develop the process and, if possible, to have one entire degree program accessible in this medium by the end of the biennium. That process is now under way. If it is successful, it will promote both economy and effectiveness in undergraduate education. holds the promise to minimize the need for capital investment, to increase student-tofaculty ratios with no loss in educational quality, and to make education available in a medium that is independent of considerations of time and place. CNU On-Line

epitomizes the essence of the continuous university.

But the University will undertake other initiatives pertaining to the delivery of instruction as well: In particular, it will introduce alternative approaches to laboratory instruction in introductory science courses and determine if alternatives such as self-paced CD-ROM simulations can promote efficiency with no loss of effectiveness in what is now a highly labor-intensive part of the instructional program. It will introduce alternatives to traditional instruction in foreign language so as to increase the utility of that requirement to its graduates. It will undertake to address systematically a comprehensive mechanism for determining which courses should be taught in large lecture sections and which should be taught in small, writing-intensive sections. And, building upon past practice, it will further eliminate unnecessarily duplicative courses in the undergraduate curriculum -- a step that requires departmental cooperation in the interest of the overall well-being of the institution. These initiatives are addressed in strategies eight through 12.

A sound structure for baccalaureate degrees and an innovative array of mechanisms for the delivery of instruction must be accompanied by an effective system of academic advisement. Effective programs, effective delivery systems, and effective advisement will have positive impacts on both retention and graduation rates. Christopher Newport University will streamline its mechanisms for freshman placement and will take steps to assess the effectiveness of its system of academic advisement -- with special reference to its relation to retention and graduation rates -- and will restructure this system in accordance with the findings of this study. This initiative is addressed in strategies 13 through 15.

- STRATEGIES AND ACTIONS -

Restructure the general education requirements for degree-seeking students.

Responsibility: Undergraduate Curriculum Committee and Faculty Senate

Timeline: Implementation in FY96

Measurement: To be developed as appropriate, consistent with the goals of the new general education proposal attached at Annex Six

Secondary Objectives: Objective 3: To minimize administrative and instructional costs; Objective 4: To prepare for the demands of enrollment increases

Discussion

Curriculum discussions are actively underway in light of both restructuring goals and agenda items highlighted by the Governor's Blue Ribbon Strike Force. The general education proposal recommended by the curriculum committee and being reviewed by the Faculty Senate is attached at Annex Six. This reform will reduce general education requirements, on average, by 15%.

General Education requirements at Christopher Newport University currently range from 59 to 64 semester hours, depending upon the degree being sought. In 1994, the University graduated a total of 668 students, having a combined total of 90,580 semester hours of which 24,302 (nearly 27%) were transferred. Thus, the average number of credits earned by a baccalaureate degree recipient at Christopher Newport University is 135.6 -- well in excess of the minimum 122 presently required.

Using the graduating class of 1994 as a model for future classes, a 15% reduction in general education requirements for every student equates to an annual reduction of more than 4,500 semester hours taken by the graduating class. This reduction could achieve an annual cost avoidance of approximately \$600,000 on the part of students and an annual cost avoidance of more than \$437,000 in E&G general fund support. These 4,500 semester hours equate to 150 FTE students. Thus, by the time its full effects are felt, this action alone would enable the University to accommodate 150 additional FTE students annually. University estimates that one-third of the full effects of this action will be manifest in FY96 and that its full effect will be felt by FY98.

Reducing general education requirements is consistent with considerations of flexibility, efficiency, and client orientation. While the goals, curriculum, assessment activities, and administrative organization for undergraduate general education that are eventually approved may differ somewhat from those currently under review, the final version will involve restructuring criteria 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11. The University will make faculty and staff development (criterion 4) and rewards and incentives to guide faculty behavior (criterion 9) integral parts of this activity. Accordingly, the University will make development activities aimed at increasing the effectiveness of the program of undergraduate general education a priority in its ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the deans and the provost in their recommendations and decisions on such matters.

5 Reduce to 120 the number of credit hours required to complete degrees, except as required by accrediting agencies.

Responsibility: Undergraduate Degrees Committee; College Deans

Timetable: Recommendations to the Provost by March 1, 1995

Measurements: The institution will determine, for each degree program, "before" and "after" requirements for both the number of semester hours required to complete the program and the estimated minimum number of semesters of full-time study required to complete it.

Secondary Objective: Objective 3: To minimize administrative and instructional costs; Objective 4: To prepare for the demands of enrollment increases

Discussion

Currently, all degree programs at Christopher Newport University require 122 semester hours of coursework, with the exception of: the BA in applied physics (124); the BS in applied physics (126); the BS in computer science with concentration in computer engineering (130); the BS in information science (123); and the BM (Bachelor of Music) (130, 136, 138, 140 and 142), depending upon track.

Beginning with the 1995-1996 academic year, the BA in applied physics, the BS in applied physics, and the BS in information science will be reduced to 120 semester hours of coursework, while the BS in computer science with concentration in computer engineering will be replaced by the BS in computer engineering (131). Although the semester hours of coursework required

by this latter degree are driven by accreditation requirements, the proposed general education reductions will further drive this to 122 semester hours of coursework.

Accreditation requirements are also the primary driving force behind the individual BM tracks. However, as part of its on-going restructuring efforts, the Department of Arts and Communication will reduce these hours by five percent. This, in conjunction with the proposed general education reductions (see objective 2, strategy 4), will drive the first two tracks to 120 hours and reduce the remainder to (122), (124) and (126) semester hours of coursework, respectively.

Using the graduating class of 1994 as a model for future classes, these additional reductions in major field requirements for these degree programs equate to an annual reduction of 115 semester hours taken by the graduating class. These reductions will achieve an incremental annual cost avoidance of \$15, 295 on the part of students and an incremental cost avoidance of \$11,155 in E&G general fund support -- a total cost avoidance of \$26,450.

This strategy is consistent with considerations of flexibility and efficiency, to become more client oriented, and to encourage higher graduation rates. The 1995-1996 Catalogue will contain tables showing (course-by-course and semester-by-semester) how each of its undergraduate degree programs can be completed with no more than four years of study. The Undergraduate Degrees Committee will be charged with the responsibility of developing such tables in time for such inclusion. This activity addresses restructuring criteria 1, 2, 3, 5, 6, 8, 10. In particular, the four-year retention and graduation rates (criterion 10) of fulltime members of the annual first-time freshman cohorts who seek degrees at Christopher Newport University will be monitored by the Office of Institutional Effectiveness to ascertain whether or not increases occur following implementation of the necessary reductions in hours and *Catalogue* publication of the step-by-step degree progress tables.

Expand curricular opportunities for undergraduate internships.

Responsibility: College Deans

Timeline: Recommendations to the Provost in FY96

Measurement: Degree programs with undergraduate internship opportunities will be monitored on an annual basis, as will numbers of students engaged in such activity. Direct costs of instruction for internship activity will be monitored as well. The Office of Institutional Effectiveness will conduct employer evaluations of student preparation for meeting employer needs.

Secondary Objective: Objective 5: To address funding priorities as approved by the General Assembly

Discussion

The University has an extensive program of internships. In addition to those disciplines (e.g., teacher education, nursing, social work) in which internship activity has long been established as a part of the University's program of undergraduate education, Christopher Newport University has also established internship programs in accounting, anthropology, communication, computer science, economics, finance, gerontology, government, management, marketing, physics, psychology, public writing, recreation and tourism, sociology, and theatre.

Of special significance in this regard is an innovation in the Honors Program of the University that is now in its first semester of implementation: Effective with the 1994-1995 academic year, each second-year student in the Honors Program (approximately 20 students per year), will, regardless of major field of study, enroll in SOWK 200 (Volunteer Services). In addition to exposing the student to the nature of volunteerism in contemporary society, each student will perform volunteer services in a targeted volunteer agency under the supervision of a member of the social work faculty. The objective of the program is to assure that these students of the University graduate with substantial exposure to volunteer experience.

In the present year, there is a significant commitment to -- and involvement with -- the "Achievable Dream School" in Newport News. "Achievable Dream" receives funding from United Way and other sources and is dedicated to enhancing the life goals and improving the academic performance of disadvantaged youth in the inner city. The Achievable Dream School operates with considerable autonomy under the oversight of the Newport News Public School System. Christopher Newport University has committed some of its best undergraduates to serve in this setting and to learn first-hand the nature and rewards of volunteerism.

Internships of all kinds are, by their nature, labor intensive. Therefore, this initiative is not intended to save money but rather enhance the quality of education through a highly coordinated and integrated program of personal study and practical, meaningful, work experiences. The outcome will be highly skilled graduates with four-year degrees and experience in specific fields, ready to enter the work force with skills that are in demand. In fact, many employers

who participate in these programs are more likely to employ these students on a full' time basis when they graduate. The University will expand the opportunities and strengthen the current internship program to assure that both the social and academic dimensions of internship activity are represented in its undergraduate curricular offerings by offering a course of study that complements the internship opportunity. At the same time, the University will take steps to reduce the per unit cost of putting students through this program by combining academic counseling with program monitoring and student development. Internships will not add additional credit hour requirements (beyond 120 semester hours) to degree programs. Special attention will be given to developing appropriate job-related internship opportunities in traditional liberal arts programs.

This activity addresses criteria 1, 2, 3, 4, 5, 8, 9, 12, 13. The University has already made partnerships with public schools (criterion 13) central to this activity; moreover, it will make faculty and staff development (criterion 4) and rewards and incentives to guide faculty behavior (criterion 9) integral parts of it as well. Accordingly, the University will make development activities aimed at increasing the effectiveness of its resulting program of undergraduate internships a priority in its ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the deans and the provost in their recommendations and decisions on such matters.

T Expand the opportunities for undergraduate cooperative education programs.

Responsibility: College Deans

Timeline: Recommendations to the Provost

in FY96

Measurement: To be determined

Secondary Objectives: Objective 4: To prepare for the demands of enrollment increases; Objective 5: To address funding priorities as approved by the General Assembly

Discussion

Interest in this restructuring activity arises from a recognition that there appears already to be a *de facto* cooperative education program that is rather wide-spread at Christopher Newport University. Many of the University's nontraditional students appear to be pursuing their educations on a "stopin, stop-out" basis, with semester-long or year-long periods of full-time attendance alternating with periods of full-time employment and either no attendance or greatly reduced attendance. Still others have arranged for flexible time with their employers so that they can commit Tuesday's and Thursdays (or, in a few cases, Mondays, Wednesdays, and Fridays) to attending Christopher Newport University while reserving the remaining weekdays and/or weekends for their jobs; and the University has responded by tailoring its course scheduling practices so that entire degree programs can be completed on either an exclusive Tuesday/Thursday basis or on an exclu-Monday/Wednesday/Friday Providing systematic means of addressing the needs of these students has implications for strategy 8 under objective 2 (CNU OnLine) and for strategy 25 under objective 4 (alternative academic calendars). Moreover, planned absences from campus of students serving in cooperative education programs will allow more students to be accommodated using the same facilities. The examination referenced in this section will incorporate measurement devices developed according to the applicable timeline. It will involve each departmental faculty and will be under the direction of the four college deans.

This activity addresses criteria 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, 14. Of special interest is its potential to impact positively on long-term retention and graduation rates (criterion 10), although the nature of the clientele served by such a program will require the development of graduation rate measures appropriate to this clientele (cf. objective 2, strategy 15). In particular, this clientele is seldom part of a "first time freshman cohort" of the University and its timeline for degree completion is, by its nature, not that for full-time students. The University will develop appropriate measures for success rates for this clientele.

Fully implement and assess CNU On-Line.

Responsibility: Dean of Academic Support

Timeline: Consistent with the provisions of Annex Seven

Measurement: Assessment mechanisms for *CNU On-Line* are now well along in their development. These include measures of both student learning and student satisfaction that compare results in sections of courses taught in the traditional classroom setting with sections of the same courses taught in the medium of the electronic bulle-

tin board. Because CNU On-Line is designed to enhance both writing and computer skills, the effect of the medium on the development of these skills will be assessed as well. Long-term studies of the direct costs of instruction for CNU On-Line -- and long term studies of the extent to which the CNU On-Line medium is serving Virginia citizens who would otherwise either be not served or be inadequately served by public higher education -- will be devised and conducted on a systematic basis. Given the nature of the medium, record-keeping appropriate for such assessment activities is already in place; the full assessment plan for CNU On-Line will be complete prior to the end of calendar year 1994.

Secondary Objectives: Objective 3: To minimize administrative and instructional costs; Objective 4: To prepare for the demands of enrollment increases; Objective 5: To address funding priorities as approved by the General Assembly

Discussion

CNU On-Line was funded by the 1994 session of the Virginia General Assembly, consistent with the provisions of its addendum request 102. Excerpts from this request, which describe the philosophy and nature of the medium, are enclosed as Annex Seven to this submission. By the end of the biennium, the entire governmental administration degree (BSGA) will be available on-line to students through the medium of the electronic bulletin board. If this effort is successful, other degree programs will follow. In this first semester, 10 carefully-targeted class sections are being taught in this medium; and the number should nearly double in the spring. More than 100 new students are now being served, and the program has received very positive national publicity.

The electronic bulletin board as a medium of instruction differs in profoundly significant ways from traditional classroom instruction; and its success requires correspondingly profound adjustments on the part of students, faculty, and administration. Structured faculty development and training activities, structured student support activities, and significant changes in the administration of admissions, registration, payment of tuition and fees, and advisement have been developed and implemented that will permit CNU On-Line to reach its full potential at Christopher Newport University. Targeted funding received in the Appropriations Act of 1994 for this effort is being used not only to insure that those faculty already sophisticated in the use of the new medium of instruction have the time to serve as assigned mentors to faculty teaching in the medium for the first time but, also, so that those who are learning to teach in the new medium have the time necessary to learn. As these latter faculty develop their skills, they too will become mentors for future generations of instructors in the medium of the electronic bulletin board.

The electronic bulletin board serves three interrelated functions: It is a word processing system, an e-mail system, and a data base. Past experience with the medium has shown that a class section of 35 to 40 students will typically generate as many as 4,000 (permanently recorded, continuously accessible, and electronically organizable and reorganizable) messages by students and faculty. Both students and faculty participate from any site with properlyequipped personal computers and modems or Internet access. There is evidence that in this medium the quality of the educational experience increases as the size of the class gets larger.

If, as expected, CNU On-Line proves to be effective as a means of outreach to new student clienteles with interests that transcend the requirements for the BSGA degree program, then the requirements for faculty development in these new areas and for the delivery of instruction in the new medium will increase correspondingly. Because the program lends itself to accelerated instruction in shortened terms, a new schedule of "subsemesters" that will permit the traditional semester to be divided into two seven and one-half week terms (cf. objective 4, strategy 25) will be implemented by spring of 1995. Such terms will render completion of a baccalaureate degree possible in less than three years of full-time study. These subsemesters can be used for scheduling traditional classroom instruction as well. This system allows for flexibility in the timing of faculty teaching commitments during the calendar year (cf. objective 1, strategy 1) and it has clear implications for accommodating increased enrollment with minimal increases in requirements for academic space. These are but a few of the many benefits of CNU On-Line.

Because of start-up costs, CNU On-Line's per unit cost is presently higher than the current university-wide average of \$7,992 per annual FTE student. With an increase of only 35 FTE students, the per unit cost will break-even by the end of FY96. By FY98, the per unit cost per CNU On-Line student will be 38% lower than that of the general enrollment representing a total cost avoidance of \$470,937. This will be accomplished by increasing the average "virtual class size" from 19 students to 35 students by FY98 and, at the same time, increasing the number of courses being offered to accommodate the additional enrollments. It assumes that CNU On-Line will expand its course offerings from nine to 44 courses per

semester and will attain an annual FTE enrollment of 152. If this holds true, it is projected that the student to faculty ratio will be at least 30:1 versus the 17:1 for the traditional instructional programs. results in a net savings of 3.87 full-time faculty positions. These positions account for \$217,688 (including benefits) of the total cost avoidance figure. The remaining \$253,249 represents the portion of overhead that is not consumed by CNU On-Line students. This is because these students need not set foot on campus to complete their program of instruction. Therefore, it is unlikely that facilities or resources such as parking, student life, auxiliaries, etc. will be used and their associated costs can be avoided. Because a more detailed analysis is needed to fully and more accurately capture the costs associated with this program and its impact on per unit cost (including auxiliaries), future cost analyses will analyze the effect that the cost of capital construction has on per unit cost. This analysis will determine the difference between the incremental cost of adding classroom space versus the cost of adding computers and telecommunications equipment to accomsimilar enrollment increases. modate Clearly, with all other things remaining equal, the up-side capacity to absorb additional enrollments without adding capital costs will dramatically reduce the per unit costs of instruction through this medium in the long run.

This activity addresses criteria 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. Faculty and staff development (criterion 4) is already central to this activity; moreover, rewards and incentives to guide faculty behavior (criterion 9) are integral parts of it. Development and training activities aimed at increasing the breadth of faculty participation in CNU On-Line are a priority in the ongoing programs for granting released time and awarding fac-

ulty development grants, sabbatical leaves, promotion in academic rank, and merit pay. Explicit cognizance of these priorities will be taken by the deans and the provost in their recommendations and decisions on such matters. The potential of *CNU On-Line* to positively affect retention and graduation rates (criterion 10) because of its heavy use of accelerated terms of study is also of significance in this restructuring.

Restructure the traditional format of "hands-on" laboratory instruction for introductory science courses.

Responsibility: Dean of the College of Science and Technology

Timetable: Implement changes throughout the 1994-1996 biennium

Measurement: Measures of both student learning and student satisfaction that compare results for students taught in the traditional laboratory setting with those of students taught in the alternative modes will be devised and their results analyzed. Longterm studies of the effect on direct costs of (laboratory) instruction will be devised and conducted.

Secondary Objective: Objective 3: To minimize administrative and instructional costs; Objective 4: To prepare for the demands of enrollment increases

Discussion

The College of Science and Technology has already initiated alternative modes of laboratory instruction. From the perspective of promoting economy in instruction without a corresponding sacrifice in quality, the present pilot project in effect doubles the student to faculty ratio for laboratory instruction in

introductory courses and, simultaneously, doubles the efficiency of space utilization for such laboratories. Students actually meet in the laboratories for only seven three-hour blocks per semester rather than the traditional 14. In lieu of seven other meetings, students engage in a structured program of independent study involving computerized simulations and written reports. If the pilot project is successful, the savings in space requirements and faculty, time will eventually offset requirements for hardware and software support and related faculty development within three years. This will reduce the number of laboratory sections by 14. Full-time faculty normally assigned to teaching these laboratories will be reassigned to teaching courses now covered by adjunct faculty. As indicated in objective 1, strategy 1, adjunct instruction costs \$557 per LHE. Since 14 laboratory sections equate to 28 LHE's, this reduction yields an annual savings of \$15,596 in adjunct wages and FICA, an estimated savings of \$5,000 in supplies, and an annual savings of 28/30 = 0.93 FTE wage faculty.

The Department of Psychology has replaced certain components of animal experimentation with computer simulations to reduce laboratory costs. But these activities are far more limited in scope than the efforts of the College of Science and Technology for innovation in introductory science laboratories.

This strategy addresses criteria 1, 2, 3, 4, 5, 6, 8, 9, 11, 12. Faculty and staff development (criterion 4) is central to this activity; moreover, it will make rewards and incentives to guide faculty behavior (criterion 9) an integral part of it. Development activities will be aimed at increasing the ability of faculty in the College of Science and Technology to promote efficiency in laboratory instruction a priority in its ongoing

programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the dean of the College of Science and Technology in his decisions and recommendations on such matters.

10 Implement alternate means for degree-seeking undergraduates to meet their foreign language requirements.

Responsibility: Dean of the College of Arts and Humanities

Timeline: Implement changes throughout the 1994-1996 biennium

Measurement: Measures of both student learning and student satisfaction that compare results for students taught in the traditional courses with those of students taught in the alternative courses will be devised. Long-term studies of the effect of alternative approaches on the direct costs of language instruction and on the satisfaction levels of both graduates and their employers will be conducted.

Secondary Objective: Objective 3: To minimize administrative and instructional costs

Discussion

This strategy has two objectives: To ensure the effectiveness of academic offerings and to minimize administrative and instructional costs. Both will be addressed by relating the nature of foreign language instruction more closely to discipline-specific needs. Reduced attrition will generate cost avoidance.

The undergraduate general education requirements of the University include at least one year of foreign language for every student completing a baccalaureate degree. Students in foreign language courses have indicated that they prefer courses more closely related to their major fields of study. For example, students and faculty in business disciplines often indicate that foreign language courses which place greater emphasis on language used in the context of business would increase interest and heighten the overall benefit of the courses. In response, in fall, 1994, an alternative method ("Business Spanish") was offered to students as a means of completing the second year of foreign language instruction. Reaction to the course has been positive. and the College of Arts and Humanities will now develop a first-year course with similar focus. As the interests of students and faculty become manifest, other specialized offerings (e.g., "Scientific German") will come into being in subsequent years. The creation of these approaches to a foreign. language will enhance the effectiveness of foreign language instruction at Christopher Newport University and will serve to minimize instructional costs. Attrition rates in introductory foreign language courses are among the highest in the University. In the 1993-1994 academic year, these rates averaged nearly 30% from first semester to second semester. To the extent that they succeed in enhancing student interest and performance, one of the predictable effects of the advent of specialized sections of introductory language courses will be that they will also reduce these high rates of attrition generate some degree of cost avoidance.

In the fall semester, 1995, the University will replace 10% of its existing introductory foreign language courses with specialized counterparts. Given satisfactory results, this

figure will rise to 20% in subsequent fall semesters. Relative to cost avoidance, the goal of the University is to cut the expected attrition rate in these courses by one-third -i.e., from 30% to 20%. The effect of this reduction in expected attrition rates will be at least 10 students in 1995-1996 and at least 20 students in 1996-1997 who will not be required to repeat their introductory course in foreign language. At present instate tuition and fee rates, this results in an annual cost avoidance for these students of approximately \$4,000 in 1995-1996 and of approximately \$8,000 in subsequent years. This is matched by a corresponding cost avoidance in general fund dollars that would otherwise be necessary to support them in repeating language courses. At current levels of general fund support, this annual cost avoidance in general fund dollars is estimated to be approximately \$2,900 in 1995-1996 and \$5,800 in subsequent years.

It is also significant that SPAN 101 (Beginning Spanish) is one of the courses being offered for the first time in the fall semester, 1994, through the medium of CNU On-Line. It is the first time that a course requiring. voice communication has been offered in the CNU On-Line medium. Students enrolled in this course are expected to maintain the same oral proficiency as their counterparts in the traditional classroom environment. To that end, each student is provided with vocabulary tapes, a blank audio tape and a laboratory manual. Students listen to the vocabulary tapes at home, in the car while driving to work or in any off-campus environment. The audio tapes are used to record laboratory exercises which are submitted to the instructor for review. Perhaps most critical to each student's success are conference calls. which are scheduled regularly between the instructor and three students. During these calls, the students are required to engage in spontaneous conversations that

are monitored by the instructor. Students are also provided with schedules of relevant Spanish language radio and television broadcasts. Subsequent offerings of this course will incorporate CD ROM technology. The same order of faculty development activities and faculty incentives and rewards described under objective 2, strategy 8, are therefore applicable here as well.

This activity addresses criteria 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12. Faculty and staff development (criterion 4) is central to this activity, and rewards and incentives to guide faculty behavior (criterion 9) are an integral part of it. The University will make development activities aimed at increasing the ability of faculty in the Department of Modern and Classical Languages and Literatures to promote academically-effective and cost efficient innovations in language instruction a priority in its ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the dean of the College of Arts and Humanities in his decisions and recommendations on such matters.

11 Continue the university-wide assessment of the appropriate balance of courses that should be taught in course sections of limited size and those that should be taught in large lecture sections, and change scheduling protocols accordingly.

Responsibility: Provost; College Deans

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95

Measurement: To include: (a) measures of student learning and satisfaction for students completing the same course in small and large class settings; (b) measures of economy; (c) measures of the institution's capacity to accommodate the demands of enrollment increases; and (d) measures of the institution's ability to offer small, laborintensive class sections (including supervised internships) as a consequence of the use of large lecture sections in a specifically targeted set of courses where the data indicate that such instruction is appropriate.

Secondary Objective: Objective 4: To prepare for the demands of enrollment increases

Discussion

The University already offers both large and small class sections. Examples of small class sections include introductory English, foreign language, and speech communication, as well as numerous upper-level and graduate seminars, internships, and writing-intensive courses. Instruction in large lecture format has been the rule in introductory science courses, introductory psychology, and introductory fine arts courses. Experimentation is already under way with offering such courses as elementary statistics in a large lecture format, and the University has already invested (in the form of released time and through the development of such projects as "class talk" -- a Funds for Excellence supported activity which expands the interactive potential of large lecture classes) in preparing both its faculty and its facilities for effective instruction in a large lecture setting.

Increased numbers of large lecture sections will assist in efforts to accommodate future enrollment increases. As new courses are identified to be taught in the large lecture

format, provision will be made for necessary faculty development and training activities and faculty reward systems to assure that the necessary changes can be made without a corresponding sacrifice in quality (cf. objective 1, strategy 2).

Scheduling large classes during peak hours will enable more students to enroll in one section, and thereby reduce the need for multiple sections, lowering the per unit cost of instruction. The emphasis on faculty development of instruction delivery skills needed in large class formats and technical skills to use multimedia instruction will guarantee the quality of the instruction for students.

The goal of this strategy is to reduce the total number of class sections offered by 10 sections in FY96 and by an additional 10 sections in FY97 and FY98, respectively. A corresponding reduction in adjunct instruction will result in dollar savings of \$5,570, \$11,140, and \$16,710, respectively, for these three time frames. This strategy will save 1.00, 2.00, and 3.00 FTE faculty positions in FY96, FY97, and FY98, respectively. CNU On-Line has direct relevance to these considerations. As was noted in objective 2, strategy 8, classes taught through the medium of the electronic bulletin board have strong potential to be very large and highly interactive, thereby combining the virtues of economy and personal attention. To the extent that CNU On-Line produces a virtual classroom of very large capacity, it will assist greatly in sustaining the institution's ability to offer increased numbers of small traditional classes where "labor intensive" instruction is both appropriate and desirable. The relationship of such efforts to accommodating enrollment increases (criterion 6), incorporating computer technology into teaching and learning

(criterion 11), and increasing use of space (criterion 12) is clear and direct.

This strategy addresses criteria 1, 2, 3, 4, 5, 6, 9, 11, 12. Faculty and staff development (criterion 4) is central to this activity, and rewards and incentives to guide faculty behavior (criterion 9) are an integral part of it. The University will make development and training activities aimed at increasing the ability of faculty to teach in large lecture formats a priority in its ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the academic deans and the provost in their recommendations and decisions on such matters.

12 Eliminate or restructure duplicative courses in the University curriculum.

Responsibility: Undergraduate Curriculum Committee, College Deans, Provost

Timeline: Recommendations to the Provost in FY96

Measurement: For such courses as are eliminated or consolidated, "before" and "after" measures of student learning and satisfaction will be devised and implemented, as will long-term measures of the direct costs of instruction in such courses.

Secondary Objective: Objective 3: To minimize administrative and instructional costs

Discussion

One distinct advantage to being an already streamlined institution is the ability to more closely monitor individual course offerings. Each year, the University's Undergraduate Curriculum Committee meets both to review proposed curriculum changes and to update the University Catalogue. If a course or program is considered duplicative, it is sent back to its initiators for reconsideration. In the academic year just ended, the faculty recognized that there was substantial duplication between the management information systems (MIS) concentration offered by the College of Business and Economics and the bachelor of science in information science (BSIS) degree program offered through the College of Science and Technology. Accordingly, the former concentration was eliminated, along with five supporting courses in the department of management and marketing. In the process, two other courses in computer science were restructured to include essential content from those eliminated. This resulted in a BSIS degree program that meets the needs of both students and potential employers and a net reduction of five courses in the curriculum of the department of management and marketing. Reallocating full-time faculty members within the College of Business and Economics from teaching these courses to teaching others (formerly taught by adjuncts) will result in an annual savings of 15 LHE's (0.50 FTE wage faculty positions) for a dollar savings of \$8,355. This process is consistent with the goals of maintaining flexibility, efficiency, and meeting the clients' needs.

The purpose of this strategy is to conduct such exercises on a comprehensive, university-wide scale. This activity addresses criteria 1, 2, 3, 5, 8, 12.

13 Assess and restructure the process of academic advising.

Responsibility: College Deans; Dean of Academic Support

Timeline: Recommendations to the Provost in FY95

Measurement: To be determined

Secondary Objective: Objective 4: To prepare for the demands of enrollment increases

Discussion

The academic advising system at the University consists of three parts: (1) the traditional individually-assigned academic adviser from the student's major department; (2) a corps of freshman advisers; and (3) an advisement center that functions during registration periods in the summer terms and in early January. Part (1) is highly traditional and substantially labor-intensive. The corps of freshman advisers [part (2)] was created a decade ago to provide especially selected and separately compensated faculty advisers to students of the first-time freshman cohort. It includes between 20 and 25 faculty who serve as individual advisers to freshmen at summer orientations and who continue in this capacity until the advisee either selects a major field of study or attains junior status. Part (3) is a facility staffed by an especially selected corps of faculty who serve students on an ad hoc basis at times when registration must be in progress but when assigned faculty advisers may not be present on campus.

The advent of *CNU On-Line* (objective 2, strategy 8) at Christopher Newport University has created the necessity for *on-line* advising as well; and the development of a

comprehensive system of on-line advisement is an integral part of the development of the total *CNU On-Line* program.

There may be a strong relationship between advisement quality and student retention and graduation rates. As the numbers of students to be served grow faster than the corresponding resources of faculty and support services, ways and means to render the advisement function more efficient but no less effective will be identified and implemented.

Such faculty development and training activities as hight be required will be supported, encouraged, and rewarded through the sanctioned processes referenced below. This assessment will identify effective means of "group advising" and faculty time thus saved will be reallocated to other components of faculty responsibility.

This activity addresses criteria 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. Faculty and staff development activities (criterion 4) aimed at increasing the efficiency and effectiveness of the advisement process and rewards and incentives to guide faculty behavior (criterion 9), are priorities in the ongoing programs for granting released time, awarding faculty development grants, awarding sabbatical leaves, awarding promotion in academic rank, and awarding merit pay. Explicit cognizance of these priorities will be taken by the deans and the provost in their recommendations and decisions on such matters.

14 Restructure freshman placement testing.

Responsibility: Office of Institutional Effectiveness

Timeline: Recommendations to the Provost in FY95

Measurement: The performance levels (grade-point averages; in-class retention rates; etc.) of members of the first-time freshman cohort will be analyzed and compared to those that existed prior to the implementation of such changes. Savings of both human and fiscal resources that result from streamlining the process will be measured.

Secondary Objective: Objective 4: To prepare for the demands of enrollment increases

Discussion

For years, the University has attempted to achieve precision in the placement of freshmen in mathematics, English, and foreign language courses through the administration of a battery of placement tests. This effort, while motivated by meeting the needs of entering students, has grown over the years in its demands on the time and energy of students, faculty, and staff. The result is a program of activity that has lengthened freshman orientation programs and has correspondingly increased the commitment required of both faculty and staff to administer these programs. If results that serve the freshmen equally well can be obtained from data already collected by the University (SAT scores, overall high school grade point averages, the nature of the high school curriculum, high school grade point averages in certain targeted courses, etc.), considerable savings in personal services can be realized at no diminution in the effectiveness of the placement program.

The Office of Student Assessment and Evaluation has already taken steps in this effort, and its preliminary findings are referenced in the University's 1994 Assessment Report.

The University will conduct the research necessary to devise such alternative mechanisms. This research will be completed in the present fiscal year, and the findings will. be put to use in the 1995 summer orientation sessions. The end result will either greatly diminish or completely eliminate the scope of placement testing and will result in the ability of the University to reallocate an estimated \$3,500 that is devoted to this activity. The activity will be conducted by the Office of Institutional Effectiveness and will involve faculty of the affected departments. If this strategy produces a system of placement that is *superior* to that presently... used in its ability to place freshman students properly, it has the potential to have a positive impact on retention and graduation rates of entering Christopher Newport University freshmen and on the ability of the University to accommodate enrollment increases. And, as noted in connection with other strategies contained in this plan, both of these data will be carefully monitored.

This strategy addresses criteria 1, 2, 3, 5, 6, 7, 10, 12, 13. The University will make the fullest possible use of streamlined and effective placement processes for entering freshmen in its efforts to *increase retention* and graduation rates for undergraduates (criterion 10).

15 Improve retention and graduation rates.

Responsibility: Office of Institutional Effectiveness

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95

Measurement: To include long-term measures of the impact of implemented changes in order to address factors identified as depressing retention and graduation rates.

Secondary Objective: Objective 4: To prepare for the demands of enrollment increases

Summary

There is evidence to indicate that the age of mobile students and adult learners requires measures more appropriate than the traditional measures of an institution's "graduation rate" (i.e., the percentages of the institution's first-time freshman cohort that graduate from the same institution where they began as freshmen within four years, five years, six years, and seven years). essence of this evidence is that, for urban institutions in particular, (a) many members of the first-time freshman cohort intend from the beginning of their college educations to transfer and become graduates of another institution, and (b) the vast majority of members of each graduating class have transferred into the institution from which they will be graduated after having been members of the first-time freshman cohorts of some other institution.

Nonetheless, Christopher Newport University will improve its order of graduation effectiveness not only by the traditional measure but also by one additional measure that may prove more appropriate to the circumstances of an urban institution serving significant numbers of mobile students and adult learners; and it will sustain a rate of graduation productivity that is already impressive according to a third measure. In particular, beginning with the University's first-time freshman cohort of 1994, the University's goal shall be to increase the traditional four-year, five-year, six-year, and

seven-year graduation rates by 20% over the rates experienced by the first-time freshman cohort of 1985. This means that for the first-time freshman cohorts of 1994 and beyond, these four graduation rates will be no less than 12.0%, 30.7%, 39.0%, and 44.0%. Moreover, a second goal is set of increasing the nearly-constant historical ratio of annual graduates to annual FTE enrollments from 16.5% to 20.0% by the year 2000. Finally, a third goal is set of consistently maintaining an annual graduating class the size of which is no less than 130% of its first-time freshman cohort four years earlier.

Discussion

A number of strategies and actions are discussed elsewhere in this document that address criterion 10. In the 12 strategies and actions identified under objective 2 alone, numbers 5, 7, 8, 10, 13, and 14 are identified as having such potential. But in the absence of appropriate research findings. the University cannot know whether or not it is overlooking significant factors that adversely affect its rates of retention and graduation. That is why commitment to research of this kind is important in the context of restructuring. While the conduct of such research is the responsibility of the Office of Institutional Effectiveness, the study will involve faculty, students, and alumni.

One of the significant issues to be addressed in this study is the matter of defining appropriate measures for graduation rates, and the University has already begun to address this problem. At the moment, it appears that the only measures recognized as "graduation rates" in the Commonwealth are really the percents of an institution's first-time freshman cohort that graduates from the same institution within a period of four years, five

years, six years, or seven years. These data were published recently by SCHEV, by institution, for the first-time freshman cohorts of the 1985-1986 academic year and are shown in table four.

Table Four

Percent of this Institution's 1985 First-time Freshman Cohort which had been Graduated by this Institution by the Spring of:

Institution	1989	1990	1991	1992
GMU	8.7%	30.8%	39.2%	42.5%
ODU	15.5%	37.4%	43.7%	46.7%
UVA	77.6%	89.1%	90.9%	91.5%
VCU	16.3%	33.3%	40.1%	43.7%
VPI	31.2%	62.3%	69.7%	71.7%
W&M	70.2%	82.5%	85.2%	85.6%
CNU	10.0%	25.6%	32.5%	36.7%
CVC	17.9%	31.2%	34.2%	34.6%
JMU	50.9%	75.6%	80.1%	81.3%
LC	37.4%	47.6%	48.9%	49,1%
MWC	50.2%	59.3%	62.4%	63.2%
NSU	2.8%	9.5%	14.7%	18.0%
RU ,	24.0%	48.5%	51.7%	53.4%
VMI	54.8%	67.4%	70.0%	71.6%
VSU	5.3%	17.0%	22.9%	25.3%

If one considers the comprehensive institutions and examines any one of the four columns shown in table four, one thing becomes instantly clear: Five of the nine institutions (JMU, LC, MWC, RU, and VMI) are very close to or significantly above the "comprehensive" average; the other four (CNU, CVC, NSU, and VSU) are substantially below the overall average.

In the absence of context, the tacit implication here is that the former five are relatively "good" in this respect and the latter four are relatively "bad". But another thing is also clear from this observation: Those institutions significantly above the comprehensive average are non-urban, primarily residential (having student bodies that are made-up largely of full-time students), and have relatively few "at-risk" students in their student bodies. The institutions substantially below the overall average are either urban institutions or institutions with significant numbers of "at-risk" students or institutions with significant commuter and part-time student bodies or some combination of these three things. It is instructive to note that this same dichotomy holds true for the doctoral institutions: UVA, VPI, and W&M (non-urban; largely residential; with

"rates" of 91.5%, 71.7%, and 85.6%, respectively) are "good"; while GMU, ODU, and VCU (urban, largely non-residential; with "rates" of 42.5%, 46.7%, and 43.7%, respectively) are "bad". The conclusion here is hard to escape: The data are not necessarily telling the reader anything about how well students are being served; rather they provide a simple and convenient way to differentiate institutions which are non-urban and largely residential from those which are either urban or largely non-residential (or both) -- and to do so casts the former in a rather favorable light and the latter in a rather unfavorable light.

And, there is no mystery as to why the institutions sort out this way: Consideration of the situation at Christopher Newport University, for example, is revealing. Each fall, many of CNU's "first-time freshman cohort" matriculate at the University with the conscious intention of transferring to another institution after one or two years. It is unreasonable to attempt to measure how well these students are served by CNU by measuring how many of them graduate from CNU -- because the expected number is zero. Moreover, because Christopher Newport University is an urban, primarily-commuter institution, many of these students are employed either full-time or part-time and are therefore not enrolled on a full-time basis. It is not unrealistic to expect that such students will take eight or more years to complete their degree programs, even if they complete them at CNU. Finally, a substantial majority of CNU's student body is made up of students who have transferred to CNU to earn their degrees. It is hard to overstate the significance of this phenomenon. Last fall, for example, the CNU student body had transferred credits to this institution from more than 800 accredited colleges, universities, and community colleges in the United States, including at least

one such institution in every state of the union. It is of interest to note that, while it is widely-known that CNU's primary feeder institution among these 800+ is TNCC, it is not so widely known that the second and third ranking feeder institutions are ODU and VPI. CNU, therefore, actually graduates significant numbers of the "first-time freshman cohorts" of both ODU and VPI. But the bottom line is this: The measure of the graduation rate of an institution with a "majority-transfer" student body only in terms of its own (minority) "first-time freshman cohorts" measures, in effect, not how well students are being served but how much the institution's "first-time freshman cohort" behaves like the "first-time freshman cohort" of a non-urban, primarilyresidential college or university. The institutions which fare best by such a standard are non-urban and primarily residential.

Every institution has a certain amount of migration in its student body, with students transferring in and out. There is no particular value in a student completing his education at the same institution where he initially matriculated. For example, why should the Commonwealth be concerned when a student from Newport News who wishes to take a degree in mechanical engineering becomes a part of the "first-time freshman cohort" of CNU and then, two years later, transfers to VPI to complete his degree? Similarly, why is it a concern for a student from Newport News to matriculate as a part of the "first-time freshman cohort" at VPI, and then decide after two years to return home to Newport News to finish his education at CNU? According to table four, the former student undermines CNU's "graduation rate" and contributes nothing to the "graduation rate" of VPI; the latter undermines VPI's "graduation rate" and contributes nothing to the "graduation rate" of CNU. Moreover, as is the case at most urban institutions, the first-time freshman cohort at CNU typically constitutes *less than ten percent* of the total undergraduate student population. The vast majority of CNU's graduates were members of the first-time freshman cohort of some other institution.

However, it is necessary to set goals for its graduation effectiveness now -- even if the measures used to articulate such goals are measures that warrant both study and refinement. Accordingly, the University sets the following three goals:

- Beginning with the first-time freshman cohort of 1994, the University will increase its (traditional) four-year, five-year, six-year, and seven-year graduation rates by 20% over the rates experienced by the first-time freshman cohort of 1985. This commitment means that for the first-time freshman cohorts of 1994 and beyond, these four subject graduation rates will, respectively, be no less than 12.0%, 30.7%, 39.0%, and 44.0%.
- One accessible indicator of graduation effectiveness measures the percent of a given year's matriculated student body that actually graduates in that year. This ratio ("ratio II") is the ratio of the size of the year's graduating class to the size of the year's annualized FTE student enrollment. It is a ratio that has been essentially constant at Christopher Newport University. From 1984 through 1994, its average value has been 16.5%. In that time, it has never been less than 14.0%; and it has never been greater than 18.3%. As is the case with many measures, ratio II is subject to distortions that can result from deviating enrollment patterns. For example, an unexpected influx of freshmen and

- sophomores can cause it to become artificially depressed while an unexpected influx of senior transfer students can cause it to become artificially inflated. But its historic annual stability at CNU indicates that it is a potentially reliable measure of graduation effectiveness for an institution of this kind. Therefore, by the year 2000, ratio II will have a sustained value in excess of 20%.
- Part of the evidence of the inadequacy of the traditional definition of graduation rate is to be found in the fact that Christopher Newport University simply graduates rather large numbers of students. Table four indicates that CNU has a "four-year graduation rate" of 10.0% for its first-time freshman cohort of 1985. As it happens, there were 289 students in that first-time freshman cohort. From these two pieces of information, one might suspect that the CNU graduating class of 1989 consisted of about 29 graduates -- plus perhaps as many more from the CNU first-time freshman cohorts of the years preceding 1985. One would infer from these data that the graduating class of 1989 consisted of no more than 60 or 70 individuals. Yet, in 1989, no fewer than 474 individuals were graduated from CNU --164% of the first-time freshman cohort This percentage is unduly of 1985. large because the first-time freshman cohort of 1985 at CNU was the smallest in the most recent decade. But it is also large because the vast majority of CNU's graduates is consistently madeup of individuals who were members of the first-time freshman cohorts of other institutions and who have come to CNU to complete their degree programs. For the 10 year period from 1985 through 1994, the graduating class at CNU has numbered 130% of the CNU first-time

freshman cohort four years earlier. The ratio of the size of the graduating class to the size of the first-time freshman cohort four years earlier (ratio III) will decline because the University's new residential dimension will cause first-time freshman cohorts to grow more rapidly than the size of graduating classes. Nonetheless, the University sets as a goal that through the year 2000, ratio III will not fall below 130%.

This activity addresses criteria 1, 2, 3, 4, and 10. This is realistic in light of the combined effects of strategies 1, 2, 4, 5, 7, 8, 10, 13, 14, 18, 22, 25, and 26 of this plan. Christopher Newport University will not only increase its retention and graduation rates, but it will identify measures appropriate to determining the order of "graduation effectiveness" of institutions serving the mobile and diversified clientele of the continuous university.

Objective Three: To Minimize Administrative and Instructional Costs

-GENERAL BACKGROUND-

There is significant concern about the cost of higher education at both the state level and within the colleges and universities. It is important that institutions of higher education actively explore ways to effect longterm reductions in administrative and instructional costs. Significant progress of this kind has already been realized at Christopher Newport University. The integration of technology into both the instructional programs and administrative operations has been remarkable during the last several years. CNU On-Line offers tremendous potential to reduce instructional costs and meet enrollment increases through both an efficient use of faculty and a relatively trivial space requirement. Its development is progressing rapidly and successfully. The library has moved to an on-line environment, and the installation of the campus backbone is in its final stages. In fact, the University has combined all information services -- the library, computer center, media services, telecommunications, and satellite technology -- into one organizational unit. This structure will provide more efficient and more responsive services to students, faculty, and the general university community.

The University has been engaged in decentralization activities in both its purchasing and its personnel functions. Although the decentralization efforts have not reduced personnel costs, there have been improvements in both the timeliness and the responsiveness of the offices to the faculty and staff. The University will continue to improve the efficiency of its organizational structure and streamline its operational

processes. It will reduce its per unit cost of instruction, while accommodating increased numbers of students.

Although relatively young as an institution, the University has undergone significant change within the last few years and remains in a period of transition. It is not only fiscally prudent but programmatically desirable to restructure the current administrative structure of the University and to implement new approaches to meeting the needs of its constituents. The introduction of residential life on campus has altered the services provided in the auxiliary enterprise programs and has changed the fiscal complexion of the organizational unit as well. It is important that these programs and the structure that supports them be effective and efficient. The University will use service management teams to develop responsive offerings in specific service areas. Finally, continuing pressures to increase productivity at equal or less cost present opportunities to examine the use of privatization in functions such as housekeeping, grounds maintenance, and printing.

Although the organizational structure of a college or university provides the framework for its operation, the internal processes of the organization determine its efficiency and in large part its effectiveness. These processes will be streamlined to reduce bureaucracy, improve productivity, and reduce costs.

There are currently 36 standing committees of the University. Most of these committees provide an invaluable service to the university community on matters related to the curriculum, degree programs, personnel,

intellectual property, strategic planning, etc. However, the University will eliminate all committees that have functional and jurisdictional overlaps.

The registration process at the University has evolved from a manual system conducted during specific time periods to a more automated, continuous process. The University will automate this process even further to an on-line system of admissions, advising, and registration with automated prerequisite checks and will phase out the more traditional service methods.

Current space limitations, projected enrollment increases, and a nontraditional student body demand the optimal use of time and facilities. The process for scheduling courses and facilities at the University is currently dependent on individual effort and efficiency. The present configuration of class periods has been in place for many years and may no longer be efficient in meeting the real needs of the students. More responsive and effective systems for course scheduling and facilities scheduling will be implemented to meet the needs of the continuous university.

Although the University provides data at the central agency level to monitor purchasing, budget, personnel, and payroll activities, the internal systems supporting these activities remain less than efficient. Because the efforts are labor-intensive and expensive, more effective interfaces with the automated systems will be implemented.

Applicants for admission to the University who otherwise meet the admissions requirements but whose SAT scores fall below the normal minimum can now be admitted with a requirement to enroll in the appropriate college-preparatory courses in English and/or mathematics, unless exempted by

passing the respective department's placement tests. These courses will be eliminated from the University's curriculum and potential applicants will be advised to complete remedial coursework at a community college.

Through a variety of programs and tests, students may earn college credit for knowledge achieved outside the classroom. This knowledge may have been acquired through on-the-job training, independent study, travel, educational television, military service, reading, or correspondence or university extension courses. The use of credit for nontraditional learning saves both the students and the Commonwealth time and money.

- STRATEGIES AND ACTIONS -

Restructure the University administration to continue to improve its customer service focus and realize a 5% net savings in administrative costs by fiscal year 1998 by means of the following strategies:

- (a) restructuring both the E&G and the auxiliary enterprise units of the University to improve productivity, efficiency and overall effectiveness;
- (b) creating service management teams represented by various academic and administrative departments to examine, refine, and develop more responsive service offerings in the areas of (i) admissions/recruitment/marketing, (ii) registration/payment procedures, (iii) student health and counseling services, and (iv) personnel policies/affirmative action procedures;

(c) privatizing grounds maintenance, housekeeping and printing functions to reduce costs and increase productivity.

Responsibility: Provost; Vice President for Administration and Finance

Timeline: Recommendations to the President throughout FY95 as appropriate

Measurement: Measures of student, faculty, and staff satisfaction will be devised and their results analyzed. Measures of productivity, quality and timeliness will be developed. Long-term studies of the effect of such approaches on the direct costs of the alternatives will be conducted.

Secondary Objective: None

Discussion

Christopher Newport University is an efficient, cost effective organization. The administrative departments of the University absorbed nearly all of the budget cuts in 1990-1992. Many of the positions and other non-personal services costs that were eliminated at that time have not been recovered. However, the University continues to explore opportunities that will eliminate waste and inefficiencies. This restructuring plan is intended to build upon what has already been set into motion resulting from the demands of a growing, continuous university in transition. In the past, duplication of fiscal responsibilities and staffs have resulted to accommodate an accounting structure that separates E&G and auxiliary operations rather than through the efficient implementation of prudent business practices. A restructuring of administrative and auxiliary operating practices was begun almost two years ago. An outline of that plan was completed in July, 1993, but was tabled to bring

the University's first residence hall on-line in fall, 1994. To continue this restructuring effort and to set a course for its full implementation by September 1, 1995, recommendations have been finalized. The essential elements of this restructuring effort are outlined below:

- elimination of the Vice President for Student Services position and one support staff position
- elimination of an executive level position and one support staff position
- reassignment of Vice President for Student Services duties, departments and responsibilities to the Dean of Academic Support as follows:
 - Admissions
 - Registrar
 - Financial Aid
- reassignment of Vice President for Student Services duties, departments and responsibilities to the Vice President for Administration and Finance as follows:
 - University Police
 - Parking Administration
 - Facilities Scheduling
- creation of a Dean of Students position which reports directly to the President to include the following responsibilities:
 - Student Life, including Student Activities Programming
 - Residence Life
 - Minority Student Services
 - Health Services
 - Counseling and Career Services
 - Intercollegiate Athletics and Intramurals

Many elements of this initiative are currently under way. The Vice President for Student Services position has been elimi-

nated, and the responsibilities of that position are currently being handled through an acting appointment. It is this person's responsibility to assess the student services organization from the position of staffing and whether the current organizational structure is sufficient to meet the needs of the students and whether it is cost effective through the efficient deployment of scarce resources. Because of the diminished scope of responsibilities, the Dean of Students position will, of course, be less expensive than the present vice presidency. But more important, the Dean of Students will focus solely on the lives of students. cumbered by such tasks as superintending campus police or the admissions office, the Dean of Students will be an officer in the President's cabinet whose sole concern is the student. The title "dean" (rather than "vice president"), is also appropriate for this officer. In the university environment, a vice president is typically perceived as being primarily the President's agent for some special sphere of activity; a dean, on the other hand, is typically perceived as being primarily the leader of a major functional unit of the university and (hence) as an advocate for the interests of the unit being led. In this light, the designation of the chief student services officer as "Dean of Students" is intended to make plain the importance of student well-being at the highest levels of University administration.

This approach aligns synergistic activities with similar areas of responsibility. Cost avoidance is achieved in that it eliminates duplicative functions, consolidates staff resources and makes efficient use of staff economies. As a result, the quality of the delivery of services to the University's most important clients -- the students -- is enhanced. For example, academic classroom and extra curricular scheduling are to be centrally coordinated to provide more effi-

cient utilization of space, a responsibility currently shared among five departments. There is often conflict and confusion when trying to address competing needs within the constraints of limited physical resources. A single "Scheduling and Conferencing" office will be formed to coordinate these efforts. (also addressed in objective 3, strategy 19)

The creation of the office of Dean of Academic Support, through position reassignments, has already been achieved and is an example of the University's commitment to the concept of the continuous university. Currently, this office superintends the Captain John Smith Library, the Office of Computer Services, the Office of Sponsored Programs, and CNU On-Line. Effective January 1, 1995, it will also superintend the Office of Admissions, the Office of the University Registrar, and the Office of Student Financial Aid. Each of these units of the University should be among the first to have continuous accessibility by the University's clientele and/or potential clientele -- accessibility in the virtual sense if not the physical one. That is, of course, already the case with CNU On-Line. To a great extent such is already the case with the Office of Computer Services and the Captain John Smith Library. The reassignment of the offices of admissions, registrar, and student financial aid to this unit will, before the end of the present biennium, facilitate virtual accessibility to these offices as well (also addressed in objective 3, strategy 18).

Through this restructuring, a reduction in four FTE positions will be achieved, representing more than \$200,000 in administrative cost savings. Half of these savings will be reallocated for *faculty and staff development* (objective 1, strategy 2), the other half will be reallocated for technology and service enhancements to accommodate enroll-

ment growth, particularly in the area of online registration and other service enhancements.

Service management teams will focus on the task of examining and improving the quality of service delivery systems. Traditional administrative tasks such as admitting a student, registration, and financial payments will undergo intense scrutiny with the goal of turning discrete functions into continuous processes. Interdepartmental teams will examine, re-examine and re-engineer the entire registration processes with the main objective of turning the complicated into the simple, the misunderstood into the understood, and the unnecessary into the nonexistent.

In addition, the University has begun the process of privatizing grounds, housekeeping, and printing operations. University staff are currently performing cost analyses in these areas to ensure that real savings will be recognized without significantly diminishing services. For example, the University has begun a cooperative venture with Thomas Nelson Community College to handle all print jobs not performed by Virginia Correctional Enterprises. This will ultimately lead to the elimination of the University's printing operation. Privatization will be deemed worthy if the current levels of service are not diminished and cost savings represent at least 10% of the total annual personal and non-personal services expenditures as indicated in the following table:

	Cost Savings ,	Staff Reduction
House- keeping	\$ 27,000	12 FTE
Grounds Maintenance	\$11,000	3 FTE
Printing	\$ 8,000	1 FTE

In general, privatization is an efficient means to controlling costs. However, it is not always the most effective solution. In 1991, the University began exploring privatization opportunities. Chief among the areas under consideration was the campus dining operation. Unfortunately, the University failed to meet the provision that prohibits more than 10% of the proceeds of a bond issue to be used to benefit private business and was, therefore, restricted to engage in a management contract rather than a "profit and loss" contract. A "profit and loss" contract allows an independent contractor to assume full responsibility for the operations. Specifically, this provision states that if more than 10% of bond proceeds are used to finance a facility used by private parties and if more than 10% of the debt service is derived from, or secured by, private payments, then the bonds become private-activity bonds that could be taxable. The University could not meet this standard without jeopardizing the tax-exempt status of the bonds and therefore could not achieve its goal of privatizing this function.

On August 16, 1991, the University entered into a management contract with a nationally recognized food service management company to manage its two restaurants in the Campus Center. The agreement provided for the recovery of gross management salaries of one manager plus benefits at 25% of gross management salaries totaling approximately \$45,000 per year, a general support services allowance of \$22,000 per year, and a management fee of \$18,000 per year. Due to marginal operating results for the first two years, the contract was terminated on November 30, 1993. A search was conducted to hire a dining services manager and was successfully concluded in March, 1994, resulting in savings of over \$40,000 this year. The goal is to sustain a level of business activity that will effectively eliminate all comprehensive fee subsidies by fiscal year 1997. Comprehensive fees that previously supported this operation will be reallocated to support debt service and operational costs associated with the construction of a new recreation/athletic center in the next biennium.

On the other hand, other out-sourcing strategies have met with positive results. In conjunction with the restructuring of dining services described above, an extensive analysis of the vending services operation was conducted. Three vending contracts were in effect at that time. The contract for drink machines offered limited product choices and produced unsatisfactory revenue returns. Two other contracts dealing with snacks and other vending products required University staff to collect, count, roll and deposit coins from these machines. September, 1994, the Canteen Corporation was awarded the contract to provide for all University vending services based on fixed revenues per machine rather than commissions. The new vending contract consolidates three vending agreements into one, provides more product choices, generates a fixed stream of revenue and eliminates the need to involve University personnel in handling cash collections. Preliminary estimates project revenues will exceed \$73,000 the first year versus actual revenues of \$51,000. Savings in administrative personnel costs are estimated to be approximately \$5,400 resulting from .2 FTEs needed for the cash function. This strategy is integrated with but does not duplicate the cost savings associated with objective 3, strategy 20 (Automate internal systems for purchasing, budget, personnel and payroll).

These activities support restructuring criteria 1, 2, 3, 5, 7, 12.

17 Reduce the total number of committees and eliminate existing jurisdictional overlaps.

Responsibility: Provost; Vice President for Administration and Finance

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95

Measurement: To be determined.

Secondary Objective: None

Discussion

The University's current committee structure encompasses 36 committees and 300 participants, 58% of whom are faculty. Ten percent of these committees can be eliminated because of jurisdictional overlap, freeing nearly 200 hours of faculty time, to be used in faculty training, classroom preparations, and research and development. Others can be reduced in size. This is consistent with the University's restructuring goals and will result in a more focused, responsive, and efficient system of University governance.

This activity addresses restructuring criteria 1, 2, 3, 5, 7, 8.

18 Implement continuous admissions, advising, and registration procedures that include a system of automated prerequisite checks in the registration process.

Responsibility: Dean of Academic Support

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95; implementation in FY96 Measurement: To include: (a) measures of student satisfaction; (b) measures of productivity and economy; (c) measures of the institution's capacity to accommodate the demands of enrollment increases as a consequence of the use of on-line systems; and (d) measures of savings of both human and fiscal resources that result from streamlining the process.

Secondary Objective: Objective 4: To prepare for the demands of enrollment increases

Discussion .

The use of technology in the admissions/registration process provides a significant opportunity to lower the per unit cost associated with these activities, increase throughput, and, in some cases, enhance the collegiate experience. As technology becomes more integrated in academia, many parents and students are beginning to understand and appreciate the benefits and convenience of an automated administrative system that provides "continuous shopping" and on-line payments with no lines. With academic programs such as CNU On-Line, a more technological approach is essential to fulfilling certain corporate missions. The University will implement an automated admissions/registration services consisting of both telephone and on-line computer systems. The University will phase out and eventually eliminate the more traditional methods for obtaining such services with the exception of a minor role that a backup, manual system might play. It is estimated that the University will lower the per unit cost of these dedicated resources for providing such services by as much as 75%. Net productivity savings will be \$127,887, once the system is fully operational. This savings is based on the allocation of time that Admissions and Registrar staff regularly devote to such tasks and that would be eliminated through the implementation of an automated system less the cost of administering and maintaining the automated system. The reallocation of dollar savings is noted under objective 3, strategy 16 (Restructure the University Administration) and will be used to purchase and install the system. The primary goal is to create continuous access opportunities that result from the use of technology and that will reduce the long-term need to increase administrative staff and add more space to accommodate enrollment increases. Identification of the necessary hardware and software requirements has already begun.

This activity addresses restructuring criteria 1, 3, 6, 7, 10, 11, 12.

19 Implement an automated master scheduling system.

Responsibility: Office of Institutional Effectiveness

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY96; implementation in FY97

Measurement: To include measures that compare the facilities' utilization rates and the number of course sections scheduled to rates and sections offered prior to the implementation of such changes.

Secondary Objective: Objective 4: To prepare for the demands of enrollment increases

Discussion

Christopher Newport University is recognized as having the highest utilization of classroom space among all public colleges

and universities in the state. The most recent space utilization report released by SCHEV reported that the University was one of only two senior institutions that exceeded the Council's standard for classroom utilization with 52.4 hours of use against a standard of 41 hours per week. That figure can be improved through the introduction of the weekend college and through more efficient and relevant scheduling of Friday evening and late afternoon classes. The University will automate the scheduling process to realize the most efficient utilization of existing space. This will delay the need for capital-intensive ventures.

In addition, the University has begun to restructure traditional class periods and schedules in favor of more nontraditional and convenient offerings. For example, the College of Science and Technology has made all degree programs in physics, computer science, computer engineering, and mathematics accessible to students with full-time jobs as well as to the traditional student. Classes are scheduled in the evening and on weekends to ensure that all course offerings will be available to accommodate most students' schedules. Likewise, many graduate degree program schedules use afternoons, nights and weekends extensively to allow professionals an opportunity to pursue a second degree without interrupting careers. The College of Business and Economics and the College of Science and Technology have each restructured teaching schedules to ensure that no core classes compete against each other in the same time slot. Full programs are now offered in a Monday, Wednesday, and Friday format, a Tuesday and Thursday format; and an evening format, thus providing convenient opportunities for students to complete their required classes under any of the three options.

Efficient classroom and facilities scheduling is critical to maximizing the use of available space when accommodating a variety of classroom scheduling strategies. The demand for the use of University facilities has increased dramatically over the past decade. The responsibility for committing University resources, academic and auxiliary, has traditionally been dispersed among five departments and will now be consolidated. In addition to the restructuring solutions previously explained, facilities scheduling software will be employed. Central management authority and access via the campus-wide network will provide a continuous and cost effective facilities planning model and enhance the efficient utilization of space.

This activity addresses restructuring criteria 2, 3, 5, 6, 7, 8, 12.

20 Automate and integrate the internal systems for purchasing, budget, personnel, and payroll.

Responsibility: Vice President for Administration and Finance

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95; implementation in FY96

Measurement: To include quality and productivity measures for each of the alternatives implemented.

Secondary Objective: None

Discussion

While there are modest savings associated with this strategy, its primary thrust is to improve services. With the completion of the campus-wide, fiber-optic network,

many discrete financial functions are being replaced with continuous, on-line processes. Currently, account managers receive financial reports at the beginning of each month, which represents the prior month's activity. Budget decisions are made, spending is projected, and results are evaluated at the end of the next cycle. In the current year, the University will begin implementing an on-line system that will allow account managers to access financial information, including encumbrances, on-line at any time. With the appropriate protocols, budget transfers and/or approvals can be facilitated electronically, thus reducing paperwork and time dedicated to managing budgets.

In addition, the University will participate in and support the development and implementation of the Commonwealth's new Integrated Human Resource Information System (IHRIS). The phasing out of the current personnel and payroll systems (PMIS and CIPPS) will eliminate redundant data entry and provide needed management information reports. Concurrent with these efforts, the University will evaluate a module to interface with the University's financial accounting software. The Human Resource Information System and Position Control module will provide better control and decision-making capabilities to effectively manage 80% of the University's total budget. The evaluation process will take cognizance of the work already underway so as not to duplicate the IHRIS effort and so as to determine whether it can ultimately interface with the state system. Similarly, the University will begin integrating the enrollment census database with the payroll Such action will eliminate the time-consuming task of preparing, routing for approval, and keying data to pay adjunct faculty wages, thus making more time available for other productive uses.

The development of an on-line process that: will eliminate the need to produce a manual purchase request (PR) is in progress. Historically, this process has been labor and paper intensive, requiring that a four-part PR form be typed (using a typewriter!), that it be routed for signatures, that its substance be entered into the financial accounting system to encumber the funds and, that, if necessary, a purchase order be generated. Once automated, PR's will be generated continuously on-line, using computers connected to the campus network from each department. All approvals will be handled electronically, and integration into the financial accounting system will occur interactively. This process streamlines a cumbersome administrative process that generates 15,000 PR's, each year, eliminates the cost of printing PR's and reduces staff time required to enter PR's into the system. Four test departments have begun using the system, with full implementation to begin no later than Summer, 1995. When fully implemented, this strategy will result in savings of more than \$7,100 per year. This strategy is integrated with but does not duplicate the cost savings associated with objective 3, strategy 16 (Restructuring the University Administration).

This activity addresses restructuring criteria 1, 3, 4, 7.

21 Eliminate remedial courses from the curriculum of the University.

Responsibility: Dean of Academic Support

Timetable: Recommendations to the Provost in FY95

Measurements: The performance levels (grade-point averages; in-class retention rates; etc.) of members of the first-time

freshman cohort will be analyzed and compared to those that existed prior to the implementation of such changes. Savings of both human and fiscal resources that result from streamlining the process will be measured, as will the institution's capacity to accommodate the demands of enrollment increases.

Secondary Objectives: Objective 2: To ensure the effectiveness of academic offerings; Objective 4: To prepare for the demands of enrollment increases; Objective 5: To address funding priorities as approved by the General Assembly

Discussion

Acceptable scores on the Scholastic Aptitude Test (SAT) are among the general requirements for freshman admission to the Applicants to the University University. who otherwise meet the University's admission requirements but whose SAT verbal or mathematics score falls between 350 and 400 will normally be admitted but will be required to enroll in appropriate collegepreparatory courses in English and/or mathematics (ENGL 020/MATH 030). An applicant may be exempted from this requirement through successfully passing the placement tests administered by the respective departments.

Applicants whose SAT verbal and mathematics scores fall below 350 may also be admitted. Such applicants are admitted only if, in the judgment of an admissions officer of the University, they show the potential to succeed academically. Ordinarily, it is a condition of admission that such students will be restricted at the outset to a fixed curriculum, consisting of ENGL 020, MATH 030, PHIL 101, and COLL 101, unless exempted from any of these courses by placement tests.

Effective with the 1995-1996 academic year, the college-preparatory courses in English and mathematics will be eliminated from the curriculum of the University. Applicants to the University will be required to complete the college-preparatory courses at a community college. The close proximity of several community colleges to the Christopher Newport University campus renders dual enrollment possible for those students who are eligible to matriculate in CNU courses while undertaking remedial instruction at a community college.

The elimination of remedial courses from the curriculum will result in the deletion of 13 course sections (1.30 FTE wage faculty positions) during the academic year. Fulltime faculty previously involved in remedial. instruction will be reassigned to other undergraduate courses being taught currently by adjunct faculty resulting in an estimated cost savings of \$24,000 in wages and FICA. . This action alone will enable the University to accommodate an additional 25 FTE students annually. In addition, an annual cost avoidance of more than \$99,000 on the part of students at Christopher Newport University and an annual cost avoidance of more than \$72,000 in E&G general fund support at the University will be realized.

This activity addresses restructuring criteria 1, 2, 3, 4, 5, 6, 7, 8.

22 Optimize the use of credit for nontraditional learning, including but not limited to CLEP, AP, ACE/PONSI, ACE/Military, and credit by departmental examination.

Responsibility: College Deans

Timeline: Recommendations to the Provost in FY95; implementation FY96

Measurement: In order to assure quality, the performance levels (grade-point averages; in-class retention rates) in subsequent courses (i.e., courses for which the courses in which nontraditional credit has been earned are prerequisites) of students who earn nontraditional credit will be monitored and compared to the performance levels of students who have met prerequisites by traditional matriculation in credit courses. In order to measure cost avoidance, precise records -- independent of entries on individual student permanent record cards -- of the award of nontraditional credit will be maintained and summarized annually.

Secondary Objectives: Objective 2: To ensure the effectiveness of academic offerings; Objective 4: To prepare for the demands of enrollment increases

Discussion

With the exception of a small number of "experiential" courses, every academic department at the University already permits students to earn course credit by departmental challenge examination. While this program has existed at Christopher Newport University for many years, it is not heavily used. The program is described both in the University Catalogue and in a separate brochure on "credit by examination" that is available to students in the admissions office, the registrar's office, and the office of counseling and career services. The University will revise this brochure, provide a copy of it to each entering student, and make it available in the offices of each academic dean and each academic department chairman. The benefits to students of earning nontraditional credit will be stressed in the annual programs of orientation for both freshmen and transfer students.

Similar activities will be undertaken with respect to each of the other programs noted CLEP, AP, ACE/PONSI, and ACE/Military. As is the case with credit by departmental examination, each of these programs has one thing in common: Every credit hour that is earned through such programs represents, at present in-state tuition and fee rates, a cost avoidance of \$133 on the part of the student and a cost avoidance of \$97 in E&G support from the general fund of the Commonwealth. With regard to CLEP alone, in FY94 Christopher Newport University administered 129 CLEP tests to 89 students and awarded 366 semester hours of credit to those who made sufficiently high scores. That action represented a cost avoidance to students of \$48,678 and a cost avoidance in E&G general fund support of \$35,502.

Through intensified activities, Christopher Newport University will meet a goal of awarding annually no fewer than 1,000 semester hours of nontraditional credit in FY96 and thereafter. Achieving this goal will, at present tuition and fee rates, achieve an annual cost avoidance of \$133,000 on the part of students and an annual cost avoidance of \$97,000 in E&G general fund support.

The potential of the ACE/PONSI program to achieve cost avoidance through nontraditional credit is one that deserves special mention, because it is an initiative on the part of Christopher Newport University and the American Council on Education (ACE) that will generate benefits in the form of cost avoidance that transcend CNU itself. PONSI is the ACE "Program on Noncollegiate-Sponsored Instruction." It is a national effort to assess formal programs of instruction that take place in various corporate or governmental settings and translates the learning that takes place in these

programs into semester hours of credit. Such activity takes place at the lititative and expense of the organization sponsoring the instruction; and ACE certification requires an academic evaluation of the activity that is modeled on the processes of regional accreditation (e.g., self-study, visiting team, etc.). Corporate or governmental sponsored programs of instruction that are so certified lead to student transcripts issued by ACE that denominate and measure student achievement in terms of equivalent semester hours of credit. Students can then use these credits toward completing degree requirements at any institution of higher education that accepts them.

Christopher Newport University accepts such credits under appropriate conditions. In August, 1994, CNU entered into an agreement with ACE to serve as the coordinating institution for the Commonwealth of Virginia for assessing and certifying the results of noncollegiate sponsored instruction throughout the Commonwealth. CNU will begin immediately to market the

ACE/PONSI program in both corporate and governmental agencies across the state. As this process grows and becomes accepted, Virginia citizens will come to have ACE transcripts certifying their academic achievements in the corporate and governmental sectors as being the equivalent of certain numbers of semester hours of college credit. As these credits come to be accepted by more institutions, the cost avoidance benefits to both students and the Commonwealth will be felt. ACE/PONSI has the potential to generate tens of thousands of such nontraditional credits annually in the Commonwealth of Virginia. In addition to its potential for cost avoidance on a large and multi-institutional scale, it adds significant new dimensions to the efforts of the continuous university to recognize, calibrate, and utilize the contributions of both corporate and governmental agencies to higher learning in the Commonwealth.

This activity addresses restructuring criteria 1, 2, 3, 4, 5, 6, 8, and 10.

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Objective Four: To Prepare for the Demands of Enrollment Increases

-GENERAL BACKGROUND-

The projected enrollment growth for the University is consistent with regional and state-wide estimates for economic and population growth and student demographics. The recent completion of the first residence hall and the pending acquisition of the Ferguson High School property will address the academic and residential space needs necessary to accommodate this estimated growth. Curricular changes have been initiated to improve program quality and to offer new perspectives and technology to the students. The University recently initiated its first graduate programs in disciplines particularly responsive to the regional community. The introduction of the CNU On-Line program has made distance learning an option at the University by taking advantage of current and anticipated technology and by addressing enrollment increases with marked operational efficiency and cost effectiveness.

Although the University is in a position to accommodate additional enrollment growth by the end of the millennium, it must restructure its student recruitment efforts for commuter, residential, on-line undergraduate, and graduate students. It must continue to address the needs of the military and the nontraditional student. Opportunities for weekend colleges and increased off-campus programs of instruction must be expanded.

Consistent with the nature of the continuous university, the traditional semester and term structure of the University's academic calendar will be changed to improve resource allocation, to enhance space and faculty utilization, and to address anticipated enrollment increases.

In addition to the strategies and actions detailed in this section, objective 4 has been listed as a secondary objective for many strategies listed under objectives 1, 2 and 3. Fully implementing CNU On-Line, reducing the number of credit hours required to complete degrees, and expanding cooperative education and internships will allow more students to be served in the same physical space. Other initiatives that will enable the University to accommodate higher enrollments include increasing class sizes and reducing the number of in-class hours required for laboratory sciences. Efficiency in handling increased enrollments will be facilitated by restructuring of the academic advisement process and the placement testing, by automating a master scheduling program, and by implementing continuous admissions advising and registration procedures. Full-time students will be able to complete degree requirements more quickly because of increased use of credit for nontraditional learning and increased course offerings and services during summer months.

The accommodation of enrollment growth is materially tied to increases in efficiency in instruction, and elements contributing to these increases are to be found in several strategies located elsewhere in this document. It is appropriate that the cumulative effects of these contributors be discussed at this point. In particular, strategies 8, 9, 11, 12, and 21 reveal, respectively, how the University can free 3.87, 0.93, 3.00, 0.50, and 1.30 FTE faculty positions by FY98 -- a total of 9.60 FTE faculty posi-

tions in the program of general academic instruction. By committing these positions to the accommodation of enrollment growth, the University can increase its FTE student population from 3631 to 3838 (an increase of 207 FTE students) with no increase in its total 213.24 FTE faculty in general academic instruction. The effect of this action is to increase the overall student to faculty ratio in general academic instruction from the present 17:1 to 18:1, an increase of some 5.88%.

But the meaning of that increase in accommodating already-projected enrollment growth is far more dramatic than this statistic indicates. Present projected enrollment for FY98 is 4215 FTE students, an increase of 584 FTE students over the present fiscal year. At the institution's present 17:1 ratio, accommodating this enrollment increase would require an additional 34.35 FTE faculty positions. But with the first 207 FTE of these accommodated by the 9.60 FTE faculty positions saved in strategies 8, 9, 11, 12, and 21, only 377 remain to be accommodated by incremental faculty -- and these at the new ratio of 18:1. That means that instead of 34.35 FTE faculty, only 20.94 are required to accommodate the entire increase. In other words, these five strategies alone will permit the University to accommodate 100% of its projected FY98 enrollment increase with only 61% of the incremental faculty that would otherwise be required. Allowing for a five percent margin of error in the assumptions undergirding these calculations, the University can assure that this increase will be accommodated with between 56% and 66% of the incremental faculty that would be required in the absence of these five strategies alone.

- STRATEGIES AND ACTIONS -

23 Enhance student accessibility to the University, with special reference to graduate and military students.

Responsibility: Dean of Admissions

Timeline: Implementation in FY96

Measurement: To be determined.

Secondary Objective: None

Discussion

The recruitment and retention of students is critical to maintaining the mission and vitality of the institution. The size and composition of an institution's student body can be influenced by successfully managing enrollment. This is accomplished by establishing a coordinated program of recruitment, pricing, financial aid and advising strategies and requires the continuing study of the relationship between applicant expectations, current student needs, and the programs and services offered by the institution.

Recent changes have altered the recruitment program at the University. The initiation of graduate programs, the introduction of residential life, and the downsizing of the military have affected both the recruiting market and the student body composition. The Office of Admissions is restructuring its recruitment program to respond to these changes.

In 1993-1994, for the first time in its history, Christopher Newport University recruited undergraduate students from beyond its primary service area in anticipation of

opening the University's first residence hall. In late August, 1994, the offices of Admissions and University Housing collaborated in a study of the demographics of the residence hall population to determine student expectations and market productivity. The results of that survey were used to shape recruitment decisions for the 1994-1995 academic year. A second study will be conducted in the summer of 1995.

The Director of Graduate Studies, the Dean of Admissions, and an advisory committee are developing a strategy for the recruitment of graduate students that will identify and match the needs of potential applicants with the University's programs. The committee will recommend pricing, financial aid, and service strategies with implementation scheduled to begin in the current academic year.

An admissions officer has been devoted full-time for the recruitment and retention of military students within the University's primary service area. Special application, registration, financial, and advising services have been tailored to meet the needs of the military population. However, temporary reassignments and frequent relocations hinder program continuity and limit the educational opportunities for many activeduty military. CNU On-Line is particularly well-suited to address this problem because of its flexibility and indifference to time and physical location. Discussions are under way with military personnel to tailor this program to their needs by fall, 1995.

This activity addresses restructuring criteria 1, 2, 3, 5, 6, 7.

24 Schedule courses at nontraditional times to support the development of a weekend college at the University.

Responsibility: Office of Institutional Effectiveness

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY96; implementation in FY97

Measurement: To include: (a) measures of economy; (b) measures of the institution's capacity to accommodate the demands of enrollment increases; and (c) measures of student satisfaction.

Secondary Objectives: Objective 1: To effect long-term changes in the deployment of faculty; Objective 2: To ensure the effectiveness of academic offerings; Objective 5: To address funding priorities as approved by the General Assembly

Discussion

Christopher Newport University serves a diverse student population: part-time, full-time, traditional, and nontraditional. This environment represents the dynamic mission and strength of the continuous university. If an institution is to evolve outside of the paradigm of traditional learning, it requires that discrete practices give way to the continuous evolution of the learning process and services offered.

The concept and vision of a weekend college at Christopher Newport University evolves from the progression of a well-established evening program and a clientele that, in many cases, must contend with the rigors of family and career. Through a weekend college program, the University can create programs that focus on courses

taught in intensive study formats and provide a more convenient rotation in the availability of course offerings.

Rescheduling sections of well-subscribed courses usually taught on a weekday evening schedule to Friday evenings and Saturday mornings will afford part-time students with work or family responsibilities more convenient access to the University. Rotation of the offerings could allow a student to complete all distribution requirements in the weekend college format. Additionally, coordinating evening and weekend program offerings allows part-time students to complete degree requirements in a more timely fashion.

This strategy requires shifting sections of courses to the new schedule rather than creating new sections. The shift will accommodate students unable to take classes at traditional times due to scheduling problems. Because the shifted courses will be well-subscribed and, for the most part, general education courses, the enrollment will reflect those students who would traditionally take the evening sections plus the students who could take only the courses scheduled on the weekend. The result will be increased enrollments in sections and reduced per unit cost of instruction.

This strategy allows Christopher Newport University to move in a coordinated fashion to a 5½ day course scheduling plan by utilizing campus buildings more than the current 52.4 hours per week.

This process is under way and will be augmented in the coming years with more programs that will be strategically placed into service. Currently, 10 undergraduate courses are being taught on Friday evening and/or Saturday. The MS degree in Applied Psychology has developed course offerings

in a format that alternates Friday evening and Saturday morning classes through an intensive study program. The Provost has asked each college dean to schedule at least one additional Friday night class and one additional Saturday class during each term of the current fiscal year. The results of these efforts are being carefully monitored and will be evaluated by October, 1995. By the end of the 96-98 biennium, 5% of course offerings will be scheduled in weekend courses and the University can expect lower per unit cost as a result of the expansion.

This activity addresses restructuring criteria 1, 2, 3, 5, 6, 8, 12.

Reconfigure the academic calendar to overlay traditional semesters with terms of shorter duration to improve resource allocation, space and faculty utilization, retention and graduation rates, and the capacity to accommodate enrollment increases.

Responsibility: Dean of Academic Support

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95; full implementation in FY96

Measurement: To be developed but to include "before" and "after" measures.

Secondary Objectives: Objective 2: To ensure the effectiveness of academic offerings; Objective 3: To minimize administrative and instructional costs

Discussion

Significant progress has already been made in this area. Motivated in large measure by considerations of the clientele to be served through CNU On-Line, the University has already created two 71/2-week "subsemesters" for the spring semester, 1995, and has developed the necessary systems and regulations to accommodate these new terms. These subsemesters will continue to be a regular part of the University's course scheduling of classes in both the fall and spring semesters of the academic year. The initiative has progressed to considerations of reconfiguring summer school, to become a third semester of a year-round program of instruction (cf. objective 1, strategy 1).

In addition to accommodating students in many of the courses offered through *CNU* On-Line, this strategy has the potential to address other priorities of restructuring. Using subsemesters and summer school effectively, full-time students can earn academic credit at the rate of 48 semester hours per calendar year. This makes undergraduate degree completion possible in less than three years. Subsemesters can also serve to keep a student from falling behind schedule in the pursuit of a degree just as effectively as they can serve to permit an-

other student to get ahead. For example, a student who enrolls for a full-time course load in the (regular) spring semester, 1995, and who must withdraw from one of the courses, can enroll at mid-semester in an additional course in the second subsemester of the spring. In contrast, in the spring semester, 1994, the student would have had no choice but to have completed the semester having earned only 12 hours credit.

Faculty have the potential to benefit as well. For example, a faculty member who opts to be part of the "10% shift" (described in objective 1, strategy 1 of this document) could discharge his or her annual teaching obligation to the University in the second spring subsemester (6 LHE), summer school (12 LHE), and the first fall subsemester (6 LHE), thereby leaving the period from mid-October through mid-March free for the full-time pursuit of research or other faculty development activities.

In sum, the arrangement is particularly conducive to faculty and staff development (criterion 4), increasing retention and graduation rates (criterion 10), and accommodating enrollment increases (criterion 6).

This strategy addresses restructuring criteria 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12.

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Objective Five: To Address Funding Priorities as Approved by the General Assembly

-GENERAL BACKGROUND-

Higher education in Virginia is a system recognized both for its excellence and for its diversity. It has been successful in large part because it has been supported by legislators who are committed to the system as a whole and who have respected its diversity and autonomy. Legislative funding consistently support program priorities quality, innovation, and student accessibility. Faculty salaries, student financial aid, the Higher Educational Equipment Trust Fund program, and initiatives supporting the University of the 21st Century have been given priority consistently during a period of great economic and revenue stress in the Commonwealth.

The faculty salary average for Christopher Newport University ranks third among the public comprehensive institutions of higher education in Virginia. Funds supporting student financial aid have increased by more than 100% since 1992-1993. Academic departments have added more than \$1.6 million in instructional equipment since the Equipment Trust Fund program was initiated. A program in international education has been successfully integrated into the curriculum of the University; graduate programs have been initiated; and CNU On-Line has been introduced and can be shared with other institutions. A program that supports a cooperative effort of research with CEBAF, The College of William and Mary, and Old Dominion University was funded most recently by the General Assembly.

As one looks to the future of higher education in the Commonwealth, it seems certain that funding policies will continue to support activities that promote constructive change, cooperative relationships, and economic development.

Restructuring efforts at colleges and universities must be supported by corresponding commitments to continuous planning and institutional effectiveness. Visible linkages must exist between and among the processes of planning, budget development, assessment and evaluation, and institutional research. The process must include an administrative/collegial structure that places responsibility for the strategic planning function at the highest levels of institutional responsibility, but that actively involves the entire university community.

Although Commonwealth funding policies do not provide direct support for most public service and continuing education programs, these programs are an integral part of the University's mission. Previous efforts to develop cooperative educational and public service programs with the community have been very successful. The Virginia Peninsula Leadership Institute, the Summer Institute for the Arts, and the Peninsula Business Breakfasts represent a few of these efforts.

The University's role as a community resource is important in the development of regional economic opportunities. The University is active in many such initiatives (e.g., technology transfer) and is central to others (e.g., SEVAnet); and it will continue to develop still others (e.g., the Center for Excellence in Urban Education) in coopera-

tion or partnership with community and educational leaders.

- STRATEGIES AND ACTIONS -

26 Restructure the institutional effectiveness functions of the University.

Responsibility: Office of Institutional Effectiveness

Timeline: Reorganization accomplished; implementation underway

Measurement: To be determined

Secondary Objectives: Objective 2: To ensure the effectiveness of academic offerings; Objective 3: To minimize administrative and instructional costs

Discussion

A copy of the President's memorandum of August 11, 1994, which initiated this process, is enclosed as Annex Five. Consistent with his directive, the Office of Institutional Effectiveness has been established and has assumed administrative responsibility for planning, budget, assessment and evaluation, and institutional research.

Assessment policies and procedures for the analysis of academic programs have been in place for 11 years. A highly visible and successful program review process is conducted by the Undergraduate Program Review Committee. The systematic collection of program data, combined with formal reporting to the administration through each college dean is a well-established feature of departmental and major program review at

the University. Evidence suggests that program self-study using assessment techniques is useful and provides long-term benefits. The deliberative process results in disclosures and frank discussions of both strengths and weaknesses in programs. The administrative procedures also ensure that conclusions reached collegially result in specific action agendas for change. A consistent record of successful use of assessment within academic program review is the single most persuasive argument for the current usefulness and future potential of assessment at the University. Assessment activities have been extended to certain functional areas within the Division of Student Services and have become an important element in that jurisdiction's program planning activities. The University is now actively engaged in the development of assessment policies and procedures for all administrative programs. These activities are scheduled for completion in spring, 1995, so that assessment can be linked to planning, budgeting, and resource allocation.

Improved budget monitoring procedures were initiated recently to encourage the responsible management of resources at the department level. As the University continues to decentralize and streamline its purchasing activities, it must, and will, simultaneously provide additional budget controls in the system to warn account managers of potential problems.

Although the new planning structure at the University is still in the early stages of implementation, its goal of improving institutional effectiveness is being pursued aggressively. While the development of the strategic plan and the linkage of planning, budget, resource allocation, and assessment and evaluation involves all of the restructuring criteria, it addresses criterion 5

most directly. The University's restructuring plan will be fully integrated into the strategic plan of the University and, as such, will become a part of the ongoing activities related to planning, evaluation, and assessment. All progress reports, recommendations, and results on restructuring activities will be provided to the collegial bodies responsible for strategic planning. The Office of Institutional Effectiveness will be responsible for administrative activities associated with the development, presentation and consideration of these reports.

27 Expand the University's community resource initiatives for economic development to more fully address regional employment and economic needs.

Responsibility: College Deans; The Joseph Center

Timeline: Recommendations to the Budget Advisory Committee for University Planning in FY95; implementation continuously thereafter

Measurement: To include measures of community satisfaction

Secondary Objective: None

Discussion

The Hampton Roads area is being affected simultaneously by defense conversion and high-tech development. The University is actively involved in providing resources to address regional employment and economic needs.

The Edwin A. Joseph Center for the Study of Local and Regional Government was established within the Department of Gov-

ernment and Public Affairs through an endowed gift to the University. Among the several purposes specified by the donor, the center was established "to serve as a resource for the agencies of local and regional governments of the Virginia Peninsula, and, more generally, in the greater Hampton Roads area and in the Commonwealth of Virginia", and "to serve as an agent of constructive change relative to the effectiveness of local and regional government." An effort initiated by the Joseph Professor to create a "regional electronic community" for the Southeastern Virginia Region went online in September, 1994. The Southeastern Virginia Network (SEVAnet) embraces all 15 jurisdictions that are included within the Hampton Roads Planning District Commission area. SEVAnet establishes a network that places all participating governments, schools, colleges and universities, businesses, and individual citizens in direct electronic contact with one another. In addition, SEVAnet will work with private vendors to enable local users to gain access to Internet. Users throughout the world will be able to explore the communities of Southeastern Virginia, including tourist attractions, recreational facilities, business opportunities, museums, local governments, and other features -- at their convenience, around the clock and throughout the year. SEVAnet is a partnership project, with Christopher Newport University serving as host: It has been (and continues to be) developed with the cooperation of many organizations, including the Center for Information Technology, the NASA-Langley Research Center, the Peninsula Advanced Technology Center, the Virginia Aerospace Business Roundtable and the Hampton Roads Planning District. The first node of this network has been established at Christopher Newport University. The remaining nodes will be established during the coming year. The models developed by SEVAnet

will be improved as new technologies are developed, and they will be made available to other community networks in the Commonwealth. A more complete description of SEVAnet can be found in Annex 8 of this document.

The College of Science and Technology has established the Science and Technology Applied Research (STAR) Bureau from which the community may draw upon the College's technological resources -- faculty, students, and equipment -- for either product or problem-oriented research and development needs. The STAR Bureau brings the talents and energies of teams of faculty and students to bear on technical and environmental problems, while providing state-of-the-art computational and experimental capabilities. It supports the independent development of products and services based on high-tech developments that can be produced and marketed by regional companies and it provides testing capabilities that are unavailable in the region's private sector. It facilitates the selection and transfer of technology for potentially marketable products and the transfer of ideas from laboratories (e.g. CEBAF, NASA-Langley) to appropriate high-tech private companies.

The College of Business and Economics recently established a Board of Advisors, comprising executives from NASA, CEBAF, and private enterprise. The Board identifies community needs and expectations, identifies student employment and internship opportunities, and advises the

College in matters pertaining to curriculum development and fundraising efforts. The College has also initiated an Executive in Residence Program, which allows local area executives (and retired executives) to serve as guest lecturers and to act as mentors and consultants to both faculty and students.

The College of Business and Economics and the College of Science and Technology are actively developing a Center for Entrepreneurship, a cooperative effort involving NASA, CEBAF, the Virginia Peninsula Economic Development Council, the Hampton Roads Chamber of Commerce, the Virginia Peninsula Chamber of Commerce, and other regional colleges and uni-Center versities. The will NASA/CEBAF technology to private industry and provide the educational support necessary to help entrepreneurs become successful.

The University has received a \$200,000 annual grant from the City of Newport News to support the operation of the Newport News Tourism Development Office. This partnership with the City is designed to increase travel and tourism business to Newport News, and it provides internships and practical experience for Leisure Studies and Physical Education majors.

These activities address restructuring criteria 1, 2, 3, 4, 5, 11, 14. In particular, the University will actively continue its partnership with local governments and the private sector (criterion 14) to address regional employment and economic needs.

ANNEX ONE

Restructuring Criteria

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Criteria

- Institutions should describe restructuring changes of a long-term nature, as distinct from belttightening, that have been made in recent years to respond to changed circumstances and reduced funding.
- 2. Institutions should describe the process they will use to involve faculty and other members of the academic community in the strategies and actions of restructuring.
- 3. The strategies and actions proposed in restructuring plans should be measurable against benchmarks of two kinds: (1) those that are internal to the institution, with change being measured against past practice; and (2) those that are external to the institution, with change being measured by comparison with like institutions.

Prior to September 1, 1994, the Council of Higher Education will work with all institutions to establish appropriate external benchmarks. Prior to January 1, 1995, the Council of Higher Education will conclude its study of appropriate indicators of institutional practice, on the basis of which the benchmarks established in the restructuring plans may be refined or revised.

- 4. Institutions should provide faculty and staff development activities appropriate to the strategies and actions contained in their plans.
- 5. Institutions should integrate the restructuring called for by the Governor and General Assembly with their on-going process of planning, evaluation, and assessment of student learning.
- 6. Institutions should state the extent to which they will participate in offering enrollment to increased numbers of students in the coming decade. If its restructuring plan deviates from the most recent enrollment projections approved by the Council, the institution should clearly note this.
- 7. Institutions should state their plans for administrative changes such as streamlining, privatizing, using technology, and eliminating duplicative functions.
- 8. Institutions should state their plans for curriculum change: streamlining, elimination of duplication, creation of new interdisciplinary options, introduction of new teaching techniques, and so on.
- 9. Institutions should describe plans to increase teaching productivity, paying particular attention to the system of rewards and incentives that helps to guide faculty behavior.
- 10. Where appropriate, institutions should identify strategies and actions to increase the retention and graduation rates of undergraduates.
- 11. Institutions should include plans to incorporate telecommunications and computer technology into teaching and learning in ways that improve programs of study while contributing to cost containment.
- 12. Institutions should identify changes that will increase the use of space.
- 13. Institutions should identify planned or current partnerships with the public schools.
- 14. Institutions should identify initiatives that help Virginia's economic development efforts, including partnerships with the private sector and local governments.

ANNEX TWO

Summary Matrix
Relating Strategies and Actions, By Objective, to the Criteria

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	-	,		Crit	Criteria for Restructuring	Restruc	turing	0	6	c	=	12	13	7
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Strategies and Actions	Long-term redeployment of faculty	Involvement of faculty & others in restructuring	Measurable	Faculty/staff development	Integration with on-going planning & assessment	Increased	Administrative streamlining, privatization	Curriculum	Teaching productivity, incentives	Retention & graduation rates	High-tech teaching & leaming	Space utilization	Public K-12 partnerships	Economic development
Objective One: Long-term Redeployment of Faculty														
 Flexibility in timing of faculty teaching 	• 1	•	•	•	•	•			•	•		•	•	
- 2. Faculty development	•	•	•	•	•	•	• .	•	• -	•	•	•	• .	•
3. Sponsored Programs	•	•	•	•	•				• ,		·		•	• ,
Objective Two: Effectiveness of Academic Offerings														
4. General Education	•	•	•	• ;	•	•	•	•	•	•	•			
5. Hours for degree completion	•	•	•		• .	•		•		•				
6. Internships	•	•	•	•	•	14		•	•	,	,	•	• :	
7. Cooperative education	•	•	ė	•	•	•		•		•	•	•	;	•
8. CNU On-Line	•	•	•	•	•	•	• ,	•	•	• .	•	•		
9. Laboratory instruction	•	•	•	•	•	•		•	•		•	•		
10. Foreign language instruction	•	•	•	•	•	•		•	•	•	•	•		
11. Course section size	•	• .	•	•	•	•			• ,	•	•	•		
12. Duplicative courses	•	•	•	,	•			•				•		:
13. Academič advising	•	•	•	,	•.	•	•	•	•	•	•	•		
14. Freshman placement testing	•	•	•	e ²	•	• .	.•			•		•	•	
15. Retention and graduation rates	•	•	•	• .,						•				t
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Strategies and Actions	Long-term redeployment of faculty	Involvement of faculty & others in restructuring	Measurable benchmarks	Faculty/staff development	Integration with on-going planning & assessment	Increased	Administrative streamlining, privatization	Curriculum	Teaching productivity, incentives	Retention & graduation rates	High-tech teaching & learning	Space utilization	Public K-12 partnerships	Economic development
Objective Three: Minimize Administrative and Instructional Costs														
16. Administrative reorganization	•	•	•	,	•		•					•		
17. Committee structure	•	•	• .		•		•	•						
18. "On-line" admissions, advising and registration	•		•		4	•	•		,	•	•	•		
19. Course and facilities scheduling		•	•		•	•	•	•				•		
 Purchasing, budget, personnel and payroll systems 	•		•	•			•	,						
21. Remedial courses	•	•	•	•	•	•	•	•						
22. Non-traditional learning	•	•	•	•	• .	•		•		•				-
Objective Four: Demands of Enrollment Increases														
23. Student recruitment	•	•	•		•	•	•					,		
24. Weekend college	• ;	•	•		•	•		•				•		
25. Academic calendar	•	•	•	•	•	•		•	•	• .	• .	•		
Objective Five: Funding Priorities														
26. Institutional effectiveness	•	•	•	•	•	•	•	• ;	•	•	•	•	•	•
27. Economic development	•	•	• ,	•	•					-	•			•

ANNEX THREE

Summary Table of Savings
To be Reallocated in Restructuring

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Estimated Productivity Enhancements, Dollar Savings and Cost Avoidances from Strategies and Actions

	1991-1994	1994-1995	1995-1996	1997 & Beyond
Strategy 1 Flexibility in timing of faculty teaching			\$ 249,428	\$ 249,428
Strategy 2 Faculty development			\$ 50,000	\$ 50,000
Strategy 4 General education			\$ 145,667	\$ 437,000
Strategy 5 Hours for degree completion			\$ 11,155	\$ 11,155
Strategy 8 CNU On-Line				\$ 470,937
Strategy 9 Laboratory instruction		\$ 6,865	\$ 13,730	\$ 20,596
Strategy 10 Foreign language instruction			\$ 2,900	\$ 5,800
Strategy 11 Course section size			\$ 5,570	\$ 16,710
Strategy 12 Duplicative courses		\$ 8,355	\$ 8,355	\$ 8,355
Strategy 14 Freshman advising and placement testing			\$ 3,500	\$ 3,500
Strategy 16 Administrative reorganization		\$ 56,500 (Auxiliary)	\$ 212,700 (E & G) \$ 62,000 (Auxiliary)	\$ 212,700 (E & G) \$ 62,000 (Auxiliary)
Strategy 18 "On-line" admissions, advising and registration			\$ 127,887	\$ 127,887
Strategy 20 Budget, personnel and payroll systems		\$ 2,160	\$ 7,160	\$ 7,160
Strategy 21 Remedial courses			\$ 96,653	\$ 96,653
Strategy 22 Non-traditional learning	\$ 35,502	\$ 35,502	\$ 97,000	\$ 97,000

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ANNEX FOUR

Mission Statement

Christopher Newport University

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MISSION STATEMENT

Christopher Newport University

Christopher Newport University is a comprehensive, coeducational, state-supported institution within Virginia's public university system. An academic community founded on the ideals of excellence, integrity, mutual respect, and service, the University is committed to the search for truth, and dedicated to the discovery, interpretation, dissemination, and application of knowledge.

The University provides an education that develops the student's intellectual, ethical, spiritual, and physical attributes. It prepares its students to pursue lives with meaning and purpose and to become responsible and contributing members of society. As an American university with a global perspective, Christopher Newport University enhances students' awareness and appreciation of the diversity that enriches us while building a community which unites us. It embodies the noble American maxim, *E Pluribus Unum*, that is, "From Many, One."

The University focuses on excellence in teaching and scholarship. The liberal arts provide the foundation for quality—undergraduate programs in the humanities, in the natural and social sciences, and in business and the professional disciplines. Graduate programs provide students and faculty opportunities for advanced scholarship and learning. Graduate and undergraduate research brings students and faculty together to increase knowledge. Teaching, research, and community service benefit the constituencies of the University, the Virginia Peninsula, the Commonwealth, the nation and the world.

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ANNEX FIVE

Restructuring of the Planning Process
President's Directive of August 11, 1994



<u>MEMORANDUM</u>

August 11, 1994

To:

Provost; Vice Presidents

From:

Anthony R. Santoro

Re:

RESTRUCTURING: INSTITUTIONAL EFFECTIVENESS

The recent *Report* of the Substantive Change Committee which visited our campus on January 18-21, 1994 has crystallized the need for substantial restructuring of the University's efforts in the general area of institutional effectiveness, including planning, evaluation, and institutional research. Shortly after this report was received, I asked Provost Summerville to chair a small task force that would make recommendations as to what changes were required. I have now had an opportunity to review these recommendations and, pursuant to this review, I am directing that the following actions take place, effective September 1, 1994:

- The Assistant Vice President for Administration and Finance and Director of Planning and Budget will become the **Associate Vice President for Institutional Effectiveness** and will superintend an office to be known as the **Office of Institutional Effectiveness**. The Associate Vice President for Institutional Effectiveness will continue to report to the Vice President for Administration and Finance.
- The Office of Institutional Effectiveness will assume administrative responsibility for the conduct of the University's institutional effectiveness functions, including planning, assessment and evaluation, and institutional research. The Office of Institutional Effectiveness will be administratively responsible for the coordination and execution of the University's planning process. It will link planning, budgeting, assessment/evaluation, and institutional research activities and will focus its efforts on improving institutional effectiveness.
- The Office of Institutional Effectiveness will be organized into three distinct units: budget development, assessment and evaluation, and institutional research, and each of these units will be headed by a director. In addition to having supervisory responsibility over each of these units, the Associate Vice President for Institutional Effectiveness

MEMORANDUM TO:

Provost; Vice Presidents

August 11, 1994 page 2 of 4 pages

will have direct administrative responsibility for the conduct and coordination of all University planning processes. (See the organizational chart at attachment one.) These directors are described below:

Director, Budget Development, a professional faculty position that will replace the present classified position of Assistant Director of Planning and Budget. The Director reports to the Associate Vice President for Institutional Effectiveness. Responsibilities of the position include the coordination and development of the resource allocation plan consistent with the University's mission and strategic plan. The position will support activities of the Executive Planning Council and the Budget Advisory Committee for University Planning (vide infra).

Director, Assessment and Evaluation, a professional faculty position which will be staffed by reassigning the present Director of Student Assessment from the Office of Career and Counseling Services to the Office of the Associate Vice President for Institutional Effectiveness. The Director reports to the Associate Vice President for Institutional Effectiveness. Responsibilities of the position will be broadened to include all assessment activities at the University. The position will support and assist all departments in developing and coordinating their assessment activities as they relate to planning, evaluation, and institutional effectiveness. The position will support the Office of Institutional Research in the design, administration, and analysis of studies to evaluate and improve institutional effectiveness. The Office of Assessment and Evaluation will support the activities of the Executive Planning Council and the Budget Advisory Committee for University Planning (vide infra).

Director, Institutional Research, a professional faculty position which is newly-created and newly-funded and which will report to the Associate Vice President for Institutional Effectiveness. Responsibilities will include the systematic collection, analysis, and dissemination of data to support the University's planning and decision-making processes. The position will support the Office of Assessment and Evaluation in the design, administration, and analysis of studies to evaluate and improve institutional effectiveness. The Office of Institutional Research will support the activities of the Executive Planning Council and the Budget Advisory Committee for University Planning (vide infra).

In addition, the existing classified staff position of Statistical Analyst, which now reports to the present Assistant Director of Planning and Budget will be upgraded to a classified position of **Senior Research Assistant** and will report to the (new) Director of Institutional Research. Responsibilities of the position will include the systematic collection and reporting of

MEMORANDUM TO:

Provost: Vice Presidents

August 11, 1994 page 3 of 4 pages

institutional data (including student enrollment data, facilities, faculty, etc.) for planning, assessment, and external requirements. The position will respond to requests from all departments for information, data, and analytical reports. While primarily responsible for supporting the Office of Institutional Research, this position will also provide support for the Office of Budget Development and the Office of Assessment and Evaluation. It will support the activities of the Executive Planning Council and the Budget Advisory Committee for University Planning (vide infra).

- The present Strategic Planning and Evaluation Council is abolished.
- Two new collegial bodies are hereby created and charged each with certain responsibilities regarding institutional effectiveness. These are:
 - Executive Planning Council (EPC), comprising the Provost of the University (chairman), the President of the Faculty Senate, the Vice President for Administration and Finance, the Vice President for Student Services, the Vice President for Development, and the Associate Vice President for Institutional Effectiveness. The Council reports to the President and is responsible for developing the strategic vision for the University, focusing the vision, and then providing the process for implementation of the vision -- including the review and approval of mechanisms for monitoring institutional effectiveness. The Council defines and conducts the strategic planning process for the University.
 - Budget Advisory Committee for University Planning (BACUP), comprising the Associate Vice President for Institutional Effectiveness (Chairman), the four college deans, the Dean of Academic Support, the Dean of Admissions, two members of the instructional faculty (one appointed by the Provost and one appointed by the Faculty Senate), and one representative each from the jurisdictions of the VPAF, VPSS, VPD and from the division of auxiliary enterprises, each appointed by the appropriate vice president(s). The committee advises the Executive Planning Council on matters pertaining to strategic planning and advises the Office of Institutional Effectiveness on matters pertaining to institutional effectiveness -- including operational planning, budget, evaluation, and institutional research.
 - The biennial calendar for the conduct of the University's processes in strategic planning, operational planning, resource allocation, and assessment and evaluation (found at attachment two to this correspondence) is to be implemented. This calendar specifies the roles of the President and Board of Visitors, the Executive Planning Council, BACUP, and the Office of Institutional Effectiveness in each phase of the process. This planning calendar implements the planning process, shown schematically at attach-

MEMORANDUM TO:

Provost: Vice Presidents

August 11, 1994 page 4 of 4 pages

ment three to this correspondence. The Provost and the Associate Vice President for Institutional Effectiveness are to assure that the smoothest possible transition into the new process and related calendar take place.

• The Vice President for Administration and Finance will assure that resources sufficient to implement the above reorganization -- and, in particular, to staff the positions described above -- are provided from the E&G budget of the University. Moreover, the Provost and the Vice President for Administration and Finance are to assure that activities pertaining to the implementation of these changes (including the establishment of new and/or revised positions and the initiation of related recruitment activities) commence immediately and are completed at the earliest possible date.

Each of you is to assure that those in your respective jurisdictions are made aware of the substance and importance of this restructuring to the University and to the constituencies that the University serves. Thank you.

Enclosures - 3:

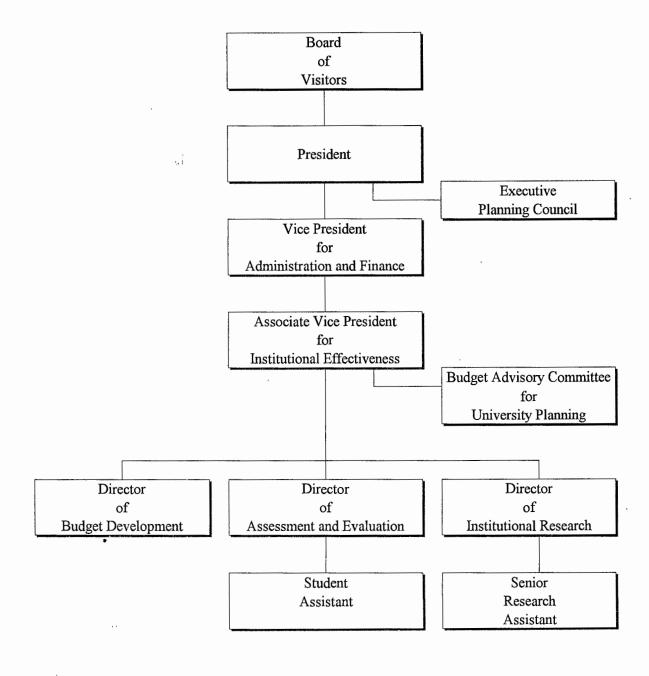
Organization Chart, Office of Institutional Effectiveness (1 page)

Planning Calendar (4 pages)

Planning Cycle Schematic (1 page)

CHRISTOPHER NEWPORT UNIVERSITY ORGANIZATION CHART

OFFICE OF INSTITUTIONAL EFFECTIVENESS



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CHRISTOPHER NEWPORT UNIVERSITY PLANNING CALENDAR BY AREA OF RESPONSIBILITY

Operating June Operating May April Operating August September October November December January February March Capital Capital Capital Biennial Capital July Prepares preliminary recommendations for annual resource allocation Reviews and analyzes results of assessment and institutional research Reviews, revises and recommends annual resource plan priorities objectives, and methods of evaluation at the department/division Reviews, revises and recommends biennial capital and operating Reviews, revises and approves recommendations to improve level. Develops biennial recommendations for both capital and Coordinates development of annual resource priorities through Coordinates development of operational plan with specific goals, Develops biennial planting priorities for capital and operating Prepares and submits capital planning document for next biennium plan for EPC's review based on recommendations of BACUP Prepares and distributes annual institutional effectiveness report Finalizes development /update of six-year strategic priorities Conducts scheduled studies and analysis of institution Executes resource allocation plan for Fiscal Year A activities and prepares recommendations for EPC Approves biennial capital and operating priorities Develops six-year strategic planning document budget based on BACUP recommendations Approves annual resource allocation plan Approves six-year strategic plan based on approved priorities operating budget priorities department/division level institutional effectiveness Assessment and Evaluation Office of Institutional Effectiveness FISCAL YEAR A President/BOV BACUP EPC

Resource Allocation

Strategic Plan Operational Plan

CHRISTOPHER NEWPORT UNIVERSITY PLANNING CALENDAR BY AREA OF RESPONSIBILITY

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	EPC	Begin development / update of six-year strategic priorities											
		Reviews, revises and recommends annual resource plan priorities											
		. Reviews, revises and approves recommendations to improve institutional effectiveness	•										
	BACUP	Coordinates development of annual resource priorities through department/division level					·						
o'a	;	Reviews and analyzes results of assessment and institutional research activities and prepares recommendations for EPC				•.,							#TT#TD
	Office of Institutional Effectiveness	Prepares and submits operating planning document for next biennium based on approved priorities											.,
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		Prepares preliminary annual resource allocation plan for EPCs review based on recommendations of BACUP				•	°u						EUT/n
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		Conducts scheduled studies and analysis of institution	•							nm			

Strategic Plan
Operational Plan
Resource Allocation

CHRISTOPHER NEWPORT UNIVERSITY PLANNING CALENDAR BY ACTIVITY

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	President/BOV	Approves six-year strategic plan		
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	BACUP	Coordinates development of operational plan with specific goals, objectives, and methods of evaluation at the department/division level. Develops biennial recommendations for both capital and operating budget priorities	Bennial Captual Bennial Operating Priorties	
	Office of Institutional Effectiveness	Develops biennial planning priorities for capital and operating budget based on BACUP recommendations	Capital	
	EPC	Reviews, revises and recommends biennial capital and operating priorities	Capital	·:
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	President/BOV	Approves annual resource allocation plan		
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	BACUP	Reviews and analyzes results of assessment and institutional research activities and prepares recommendations for EPC		
	EPC	Reviews, revises and approves recommendations to improve institutional effectiveness		

CHRISTOPHER NEWPORT UNIVERSITY PLANNING CALENDAR BY ACTIVITY

June

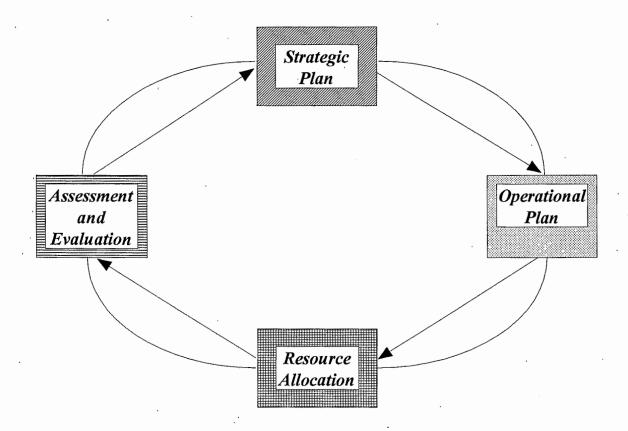
August September October November December January February March

July

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•	Begin development / update of six-year strategic priorities	Prepares and submits operating planning document for next biennium based on approved priorities	Executes resource allocation plan for Fiscal Year B	Coordinates development of annual resource priorities through department/division level	Prepares preliminary recommendations for annual resource allocation plan for EPC 's review based on recommendations of BACUP	Reviews, revises and recommends annual resource plan priorities	Approves annual resource allocation plan	Prepares and distributes annual institutional effectiveness report Coordinates next assessment cycle for academic and administrative programs Conducts scheduled studies and analysis of institution Reviews and analyzes results of assessment and institutional research activities and prepares recommendations for EPC Reviews, revises and approves recommendations to improve institutional effectiveness	
FISCAL YEAR B	Strategic Plan	Office of Institutional Effectiveness	Resource Allocation Office of Institutional Effectiveness	BACUP	Office of Institutional Effectiveness	EPC	President/BOV	Assessment and Evaluation Office of Institutional Effectiveness Office of Institutional Effectiveness BACUP BACUP Re Bacup Re Re	

CHRISTOPHER NEWPORT UNIVERSITY

PLANNING CYCLE



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ANNEX SIX

Documents Pertaining to the Reform of Undergraduate General Education

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MEMO TO:

Professors Bailey, Barbour, Bostick, Cheney, Spiller

FROM:

Provost

SUBJECT:

General Education Task Force

DATE:

April 13, 1994

I appreciate very much the willingness that each of you has expressed to serve this summer on the above-referenced task force. By this correspondence I am appointing each of you to membership on this *ad hoc* General Education Task Force and am appointing Professor Barbour as the task force chairman. I have consciously tried to keep the task force membership small and representative (one member from each college). I have asked Professor Barbour to serve as chairman because of his unique university-wide perspective as (simultaneously) library director and faculty member (indeed, presently faculty senator and secretary of the Faculty Senate).

We have come to a point in the life of the University where it is, I believe, widely-recognized that the nature of our general education requirements must undergo a comprehensive review and that questions of the most basic curricular nature must be asked and answered. As is the case with many significant events in institutional life, this one has taken shape over a long period of time, but it has been triggered by several fairly recent considerations: First, while the University does have a statement of goals that its program of general education is intended to accomplish, these goals have remained largely unaddressed in the past several years and have certainly not been internalized in any significant measure by either the faculty or the student body of the University. (A copy of a memorandum I sent to the Undergraduate Curriculum Committee in 1991 which enumerates these goals as they now exist is enclosed; the present general education requirements which are intended to implement them can, of course, be found in the current edition of the CNU Catalogue.) Second, given the nature of these goals and their apparent lack of centrality in the curricular thinking of the University, it has become difficult at best to ascertain how effectively they are being accomplished by the general education requirements that now constitute the vehicle by which we profess to accomplish them. (This deficiency was pointed-out in the most recent SCHEV review of the University's report on its program of student assessment.) And finally, there is a nearly year-old request from

Office of the Provost

MEMO TO: Professors Bailey, Barbour, Bostick, Cheney, Spiller April 13, 1994 page 2 of 4 pages

the President -- a request to which the faculty, through its constituted deliberative bodies of governance, must be responsive -- that these goals be made to include an both an understanding of the history that has shaped the civilization in which our students must live their lives and an ability for them to be effective oral communicators, and that the general education requirements identified to implement these two goals include coursework appropriate to realizing them.

Today the cumulative weight of these considerations has prompted the Undergraduate Curriculum Committee (UCC) to call for this office to appoint a special task force to examine this matter over the summer and to report back to the Curriculum Committee at its first meeting in the fall semester, 1994. Specifically, the UCC's recommendation states:

A General Education Task Force composed of faculty members will be appointed by the Provost. This Task Force will be charged with the consideration of all aspects of general education -- goals, curriculum, assessment -- and will report its findings and recommendations to the Undergraduate Curriculum Committee at its first meeting in the Fall 1994 semester.

This is the charge that I now give to you. It is a charge that will require a significant measure of commitment this summer from each of you, but it is also a charge that is filled with great promise: the promise of a genuine reform in the general education curriculum of the University and the promise that a genuine core of general education will come into being that will, in effect, define the non-negotiable heart of a baccalaureate education at Christopher Newport University. It is a charge that calls on you to rise above parochial and bureaucratic considerations and to pose and answer the central questions of what kind of qualities every baccalaureate graduate of Christopher Newport University should possess, what kind of general education requirements should be in place to assure that those qualities are present, and what kind of measures the University should have in place to determine how well the task is being accomplished. Briefly put, it boils down to three words: goals, curriculum, and assessment. The work you are about must focus upon education, not upon FTE's. Given the strong growth posture in which the University now finds itself and given the heavy dependence of the University on wage faculty for the conduct of its present program of instruction, we now have a rare and desirable window of opportunity for work with such a focus; because almost any conceivable set of general education requirements is, under these circumstances, unlikely to materially impinge upon the well-being or security of any of our academic departments.

MEMO TO: Professors Bailey, Barbour, Bostick, Cheney, Spiller April 13, 1994 page 3 of 4 pages

Clearly, you must get about your work quickly and you must pace yourselves and sustain your efforts in a fashion commensurate with the time constraints under which your work must be completed. In the course of this work you must, of course, make contact with certain constituencies of the University -- the deans, key members of the Faculty and its committees, and the assessment office, to name a few -- but the work itself is yours to do. I ask that Professor Barbour convene the task force at the earliest possible date so that its work can get under way. I think you know that I will be away from the campus for most of the next three weeks, but I would appreciate having the opportunity to meet with you shortly after my return. In the meantime, you should consider the resources of this office to be at your disposal. If it is possible for Ms. Harvey, Ms. Odell, or me to be of assistance to you, we will do everything in our power to render such assistance as we can.

Efforts of this kind often fail because they become dilatory. That is why it is wise to have a timetable. Accordingly, consistent with the provisions of the first two paragraphs of section V-D of the *University Handbook*, I wish now to exercise the prerogative of this office to approve the procedure to be followed in this matter and to "prescribe reasonable timetables for the procedure in order to assure timeliness of action." The timetable applicable to these considerations will be as follows:

General Education Task Force submits its

report and recommendations to the Undergraduate Curriculum Committee	9/1/94
Curriculum Committee submits its recommendations on the General Education Task Force Report (GETFR) to the Faculty Senate	11/1/94
Faculty Senate submits its recommendations on the GETFR to the Provost	12/15/94

Provost submits his recommendations on the GETFR to the President 1/9/95

I believe that these conventions will permit each of the parties involved to discharge their responsibilities fully and competently, given the will and commitment on the part of all involved to focus on the essential issues and to come to grips with them.

MEMO TO: Professors Bailey, Barbour, Bostick, Cheney, Spiller April 13, 1994 page 4 of 4 pages

The work you are about to undertake is arguably the most important work that will take place this year ... perhaps the most important work in many years. It will require patience, diligence, thoughtfulness, and wisdom; and it has the potential to affect in the most fundamental way the essence of what it will mean in future years to be a graduate of Christopher Newport University. I have no doubt that each of you appreciates the importance of this work and that each of you will bring to bear on it the qualities necessary to do it justice. I wish you a successful summer, for your success will be success for us all.

My thanks to you in advance for your good service.

Richard M. Summerville

Enclosure

copies (w/ enclosure) to:
President Santoro
Deans McCallister, Powell, Purtle, Webb
Dr. Dennis Ridley, Director, Student Assessment
Professor Edwin Boyd, President, Faculty Senate
Professor Edward Weiss, Chairman, Undergraduate Curriculum Committee



August 31, 1994

MEMORANDUM

To:

Ed Weiss, Chairman, Curriculum Committee

From:

Wendell Barbour, Chairman, General Education Task Force

Theodora Bostick Richard Cheney Lee Doerries Lisa Spiller

Re:

Proposed General Education Goals and Requirements

Attached are the proposed General Education Goals and Requirements from the General Education Task Force. We have labored hard over the summer to create a curriculum that will provide our students with certain skills and an educational foundation to help them cope with and understand the society and environment in which we live. We look forward to meeting with the Curriculum Committee on September 6, 1994 to discuss our work. If you have any questions before that meeting, do not hesitate to call me.

INTRODUCTION TO THE PROPOSED GENERAL EDUCATION REQUIREMENTS

In addition to addressing the six goals of general education which we formulated at the outset of our work, the proposed curriculum reflects the philosophy of general education which this Task Force has evolved as we have worked together.

We believe that the experience of general education should be incorporated throughout the four years of undergraduate education. General education courses should be writing intensive, global, and demonstrative of the interaction and relationships among the disciplines for a more authentic life and learning experience. They should foster the development of practical skills like writing, critical thinking, computer skills, and ethical thinking, and these should be incorporated across the disciplines and regularly reinforced. This curriculum is designed to work those skills into the subject matter courses instead of approaching them in isolation. This curriculum is developmental in nature. For purposes of sequencing the courses and getting the most out of the general education experience, the following courses are recommended as most appropriate for the freshman year: Written and Oral Communication, Mathematics, the University Experience, Western Civilization, Science, and Global Economics.

Another basic principle of this curriculum is that requirements ought to be competency based and that if students come to the University possessing the skills and knowledge taught in a general education course, they should be exempt from that requirement. In practical terms, this approach would free up additional hours which ideally would be used by students to develop minors and to choose courses in a variety of disciplines. It would also serve to encourage our feeder high schools to strengthen and shape their curricula to send better-prepared students to us.

GOALS

The goal of general education is to develop and enhance in students the following abilities, skills, concepts, knowledge, and ethical precepts to prepare them to live in the world, continue their quest for knowledge, and exercise their responsibilities as informed, erudite, productive, and contributing citizens.

- 1. To develop the ability to communicate effectively and accurately both orally and in writing.
 - a. To read and interpret standard English in a critical manner.
 - b. To write and speak clearly and effectively in standard English.
 - c. To analyze and interpret information and communicate the results effectively.
- 2. To develop critical thinking and analytical abilities.
 - a. To solve problems effectively, through deductive and inductive reasoning, analogy, and other means.
 - b. To apply mathematical concepts and methods effectively.
 - c. To apply scientific concepts and methods effectively.
- 3. To educate students in their common heritage and in cultural diversity.
 - a. To understand their world in its historical context.
 - b. To combat parochialism and narcissism through an understanding and appreciation of other cultures.
- 4. To develop an understanding of the natural world.
 - a. To understand the contributions of science and mathematics in everyday life.
 - b. To understand the impact of technology on the environment and society.
- 5. To develop an understanding of contemporary society.
 - a. To discern the processes, structures, and foundations of contemporary society.
 - b. To understand the impact of the competitive forces on the global economic environment and society.
- 6. To develop and apply ethical/moral principles.
 - a. To prepare students with an ethical conscientiousness when making judgments and decisions.

GENERAL EDUCATION REQUIREMENTS

1. Written and Oral Communication 6 hours

As a minimum, each three credit course will require 3 graded essays and 3 oral presentations. The oral component will evolve from the writing assignments. The writing assignments will include rewrite options. It is also recommended that one of the courses includes a unit on technical writing. Each of these classes will also involve the use of word processing in the completion of writing assignments. Competency testing will be performed in order to place the student in a higher level course or to waive this requirement altogether. One of the assessment tools will be the implementation of a rising junior test that will test language usage proficiency, etc. These classes will be limited in size in order to maximize their effectiveness.

2. Mathematics 4 hours

The course will be composed of statistics, logic systems, probability, and problem solving. Use of selected computer software will be required in the class to analyze data and to develop problem-solving skills. All students must demonstrate a competency in this area. Students may test to waive this requirement altogether, to place into a higher level class, or to take a different type of mathematics class if a particular program requires it. Any further mathematics requirements will be determined at the college level. Assessment for this requirement will be through the rising-junior test.

3. Western Civilization 6 hours

This course will be sensitive to other cultures that have had significant impact on the development of western civilization. These classes will be writing intensive. The course description is attached as Appendix A.

4. Science 6 hours

The courses will integrate ethics, philosophy of science (epistemology), history of science, methodology, statistics, and lab activities with the discipline based content. Computer applications will be a required part of the science requirement. Students will satisfy this requirement by taking either a 6-credit science sequence or by taking an 8-credit laboratory science sequence, either one chosen from an approved list. The more complete description is attached as Appendix B.

5. Social Sciences 6 hours

The courses will be organized around a theme that will include ethics and the history and philosophy of the discipline, components similar to those taught in the science and humanities requirements. The selection will be the student's choice. The students may elect to take one course each from two different disciplines or two courses within the same subject field. The courses will be writing intensive and will focus on primary sources. They will be

taken in place of the social science courses that serve as introductions to the disciplines. See Appendix C for examples of possible departmental theme courses that would meet this requirement.

6. Humanities 6 hours

The courses will be organized around a theme that will include ethics and the history and philosophy of the discipline, components similar to those taught in the science and social sciences requirements. The selection will be the student's choice. The students may elect to take one course each from two different disciplines or two courses within the same subject field. The courses will be writing intensive and will focus on primary sources. They will be taken in place of the humanities courses that serve as introductions to the disciplines. See Appendix D for examples of possible departmental theme courses that would meet this requirement.

7. Global Economics 3 hours

This is a survey course with the major emphasis placed on the global aspects of both microeconomic and macroeconomic theory and policy. As a result of the increasing flow of goods, capital, and labor across national borders, the economies of different nations have become increasingly integrated and interdependent. The fiscal, monetary, industrial, and commercial policies of individual nations affect, and are affected by, the policies of other nations to a greater extent than ever before. This course incorporates and highlights this new reality by providing students an international perspective on the application and the effects of global competition and economic policies on the world economy. Topics will include global perspectives on output determination, inflation, economic growth, costs of production, market structure, and income distribution. See Appendix E for a more detailed description of the course requirement.

8. Language 6 hours

This requirement can be met by competency testing or three years high school credit in a single foreign language or two years each of high school credit in two different foreign languages. The latter two categories require no testing in order to satisfy this requirement. If the language requirement is not met during high school or through competency testing, then six hours of a language will be required. Students may exempt this requirement at the University College level if their upper division college requires at least six hours of a foreign language pertinent to their major as part of their graduation requirement; thus students may fulfill this requirement through language courses prescribed by their major program. Any further language requirements will be determined at the college level.

9. University Experience 2 hours

This course will include instruction in computer literacy, including word processing and the use of e-mail, the Internet, and the campus network; library research methods, including electronic bibliographic and full-text resources; time management; guidance in how to

contribute and benefit fully from the university experience; and preparation to handle the academic demands each student will face at CNU. The course will be tailored to the needs of incoming freshmen, returning non-traditional students, and transfer students. This may entail creating separate sections to take into account the unique characteristics of the CNU student body. This course will be offered on a pass/fail basis. Students who hold a bachelor's degree and transfer students at the sophomore level or above may be exempted from this requirement.

10. Capstone 2 hours

This will be a two-hour seminar taken during the student's senior year and will be the culminating experience of the general education requirements. The course will display no college or discipline title and each college will develop course(s) to fulfill this requirement. A major component of this course will focus on ethics and its application. The course will be global and interdisciplinary. It will look at the subject from different perspectives. It will include a major paper, artistic endeavor, or lab activity that will be a synthesis of what that student has learned and experienced through course work, lab activities, work and field experiences, internships, independent studies, etc. Each seminar will be designed to appeal to majors from the sciences, business, professional studies, social sciences, and the humanities. Students will select for their capstone experience a course from a list of subjects prepared for this purpose. For example, the list might include courses on the Holocaust or conservation or ethics or the environment. The course will be taken for a grade and will be similar to Honors 490. The General Education Council will approve all Capstone courses. Students who hold a bachelor's degree may be exempted from this requirement.

Maximum total hours 47

In order to enhance the general education experience and to assess its success, the General Education Task Force recommends the following initiatives:

A. Rising Junior Test

At the completion of the general education requirements (with the exception of the Capstone course) and a minimum of 60 hours of course work, each student will be required to take a rising junior test that will determine if that student has met certain minimum standards in English language proficiency, mathematics, and other areas to be determined by the General Education Council and the Provost. The purpose of the test is to evaluate the success of individual students in meeting the general education requirements and the effectiveness of the general education program. Students who hold a bachelor's degree may be exempted from this requirement.

B. University College

The direction and administration of the general education requirements should be separated from the control of the departments where these courses are presently assigned. The rationale for the separation of this program would be similar to the one that allowed the administration of the graduate program to be separate from the academic departments. The University College will be administered by a director or a coordinator who would report to the Provost and will recruit its faculty from within the University, seeking those individuals who believe in the philosophy, methodology, and principles implicit in the University's general education courses. The University College would support special seminars and workshops, and it would facilitate the training of its faculty for the General Education program. It would also evaluate the courses in the program to insure that they fulfill the course requirements, to insure that the curriculum meets the core requirements all students must complete, and to insure that the general education curriculum is not diminished in its value in the total education of the University's student body.

Appendix A

History of Western Civilization Course Description

Chronological Division:

First semester: from the emergence of civilizations in the Near East through the 17th century

Second semester: from the 18th century to the present

The course is a survey of the history and development of those institutions (political, economic and social), values, and aesthetic/cultural forms which have shaped and characterized western civilization. It shows American students of the late twentieth century the social, political, and intellectual forces that have shaped their civilization.

The first semester begins with the emergence of civilization in Asia, the Near East and Greece. The pillars of western civilization are stressed: the intellectual, cultural and political contributions of the Greeks, the administrative and institutional contributions of the Romans, the Judeo-Christian religious and moral traditions, and the culture of the Germanic peoples. An examination of the medieval period, including the importance of Islam, is followed by a study of the Renaissance and Reformation eras, including the voyages of discovery and the expansion of the west. This era embodies the values, ideals, and traditions of human worth which give western civilization much of its unique character. The semester concludes with the beginnings of the development of constitutionalism.

The second semester focuses even more on the hallmark ideals of reason and freedom characteristic of western civilization. It begins with the expansion of science and the impact of the ideas and ideals of the Enlightenment, particularly in the American and French revolutions. In studying the 19th and 20th centuries, special emphasis will be placed on ideologies and developments which most influenced our modern world, among them nationalism, industrialism, socialism, imperialism, and the interaction with the non-western world. The final third of this semester will focus on the issues and challenges of two world wars, the retreat from imperialism, the Cold War, and the challenges of western leadership in a post-Marxist world.

Appendix B

General Education Requirements in the Sciences (6-8 credits):

Students will take a sequence of two three-credit courses chosen from the approved list of science distribution courses. All courses will include ethics, philosophy of science, history of science, methodology, and statistics. In addition, all courses will have hands-on laboratory activities.

In addition to the 150 minutes of lecture required each week, students will be required to complete three laboratory exercises during the semester. These laboratory exercises will teach the basics of the scientific method and will include computer applications, data handling, and statistical manipulations.

Possible courses:

BIOLOGY: Biology in the Modern World I & II (Currently BIOL 107-108)

CHEMISTRY: Introduction to Chemistry I & II (Currently CHEM 103-104)

INTERDISCIPLINARY: The Nature of Scientific Thought I & II (Not currently taught)

PHYSICS: Physics & the History of Science I & II (Currently PHYS 103-104)

Students who need an eight-credit laboratory science sequence for their programs or to transfer to another school will be able to sign up for the two additional one-credit laboratory courses that correspond to each sequence above, e.g. BIOL 107L-108L, CHEM 103L-104L, GSCI 101L-102L, PHYS 103L-104L. (These students will be exempt from the three laboratory exercises that are part of each three credit course above.)

Introductory sequences taken for major credit (e.g. BIOL 107-208, CHEM 121-122, PHYS 201-202) will not count for distribution credit in the sciences unless they are modified to include ethics, philosophy of science, history of science, etc.

Appendix C

Examples of courses satisfying the Social Science General Education requirement. (Actual courses to be developed by CNU faculty)

Quest for Justice (yearlong course):

This course explores the relationship between the individual and society as exemplified in the writings of political philosophers, statesmen, novelists, and contemporary political writers. Questions about law, political obligation, freedom, equality, justice, and human nature are examined and illustrated. The course looks at different kinds of societies such as the ancient city, modern democracy, and totalitarianism, and confronts contemporary issues such as race, culture, and gender. The readings present diverse viewpoints and the sessions are conducted by discussion.

Introduction to Archaeology (yearlong course):

Today people increasingly live in highly industrialized and urban civilizations. But how long have humans had "civilization"? What is "civilization" and how can it be recognized? This course will address these questions, first, by looking at the basic elements of archaeology and its place in anthropology. Some of the topics we will cover include the history of archaeology, fundamental aspects of fieldwork and analysis, and the prehistoric record from the first humans to the origins of civilization. We will begin the chronological sequence with the Old Stone Age, or Paleolithic Age, a long period during which basic human cultural practices and beliefs became established. Our next topic is the development of agriculture and settled life around the globe, innovations that permitted the growth of complex social organizations that culminated in civilization and the state. In the latter part of the course, we will study the first, or "pristine," civilizations, focusing on Mesopotamia and ancient Egypt. The course concludes with a survey of Mesoamerican cultural development, beginning with Mexico's pristine civilization, the Olmec, and continuing through the Mayas and Aztecs.

Introduction to Cultural Anthropology (one semester course):

This course introduces students to the discipline that studies and compares other cultures. Students learn about the history of anthropology, its principal concepts, and its methods of research, while also discovering how people live in other times and places. Materialist theories provide a framework for understanding and comparing ways of making a living and of organizing social life. Studying the ceremonies, customs, and struggles in other cultures, students inevitably re-examine some of the premises of their own culture.

Science and Society (one semester course):

The first part of this course will examine the underlying philosophical and sociological foundations of modern science. It will study the debates within philosophy of science (Brutt, Popper, Kuhn, Quine, Feyerabend, and Rorty) and sociology of science (Scheler, Ellul, Leiss, Marcuse, and Habermas) as to the exact nature of scientific investigation and the social/political meanings of scientific discoveries. Of central concern is whether science and the history of scientific discovery have been objective, value neutral, and a reflection of universal truth. Does science investigate the essential reality of nature or is it more influenced by the wider social relations and practical activity of modern industrial life -- does it reflect the nature of reality or the nature of society? The second part of the course examines the relationships between science and society. This will be undertaken by examining the underlying foundations of science, its method, values, and assumption of social practice. It will deal with the full range of the rationalization of modern society: the historical application of technological rationality (efficiency, productivity, and functionality) and social engineering to economic (workplace), political (state), and social (cultural legitimation) institutions. We will develop a social theory of science by stressing the theoretical foundations of science in modernity and the technological implications for an ecological crisis.

Human Society: Symbol and Structure (one semester course):

This course explores what are surely the most fascinating of this planet's life forms: Homo sapiens. Humans stand out in this world as thinking creatures who are, biologically speaking, unfinished at birth. Lacking a genetically fixed "nature," humans go about completing themselves as they construct societies. Understanding how we accomplish this task is the focus of this course. The course begins by describing the perspective and methods of sociology and then applies these tools to the exploration of human societies. Discussions raise issues such as how and why cultures differ, how people are socialized into their particular way of life, and how individuals explore the experience of confronting cultural practices that violate one's own standards. Additional concerns include comparison of traditional and modern social organizations, with particular emphasis on the expansion of bureaucracy and changing patterns of social inequality. The significance of race, ethnicity, and gender in social life also commands attention.

Identity in American Society (one semester course):

This course in social psychology explores the collective foundations of individual identity within the American experience. In what sense is the self essentially social, arising through interpersonal interaction? How are changes in identity attributable to the organization of experience throughout life? How do gender, race, and social class condition consciousness? How have changes in American industrial capitalism shaped the search for self-worth? What challenges to identity are posed by events in American history, including immigration and the African diaspora? How has the very advent of modernity precipitated our preoccupation with the question "Who am I"? In the course of our investigations, we will consider the wisdom of major European social theorists of the nineteenth century -- Karl Marx, Max Weber, Emile Durkheim -- as well as the writings of prominent twentieth-century American sociologists and psychologists. Students will conduct research projects to connect our ideas to everyday life. Additional course materials will be drawn from government and private survey research, and the arts and popular culture.

Appendix D

Ideas for Humanities Courses

Exploring the idea of god or the divine in literature, art, and philosophy/religious studies.

The Golden Age: A course which focuses on the literature, arts, history, and philosophy of several societies which experienced a "Golden Age," e.g., Greece in the 5th century BC; Italy during the Renaissance; Han or T'ang China.

English 207G or 208G or courses from other departments which explore important themes, e.g.

--love

--freedom vs. responsibility

--death

--the individual vs. society

--growing up

Appendix E

Global Economics

Profound changes are occurring in the world economy. Increased global competition and the elimination of trade barriers have led to a worldwide marketplace for goods and services. The increased flow of goods, capital, knowledge, and labor across national borders has resulted in an unprecedented level of integration and interdependence between national economies. To a greater extent than ever before, economic events and policies in one country have a significant impact on the economies of other countries and the material well-being of their people.

This new economic environment has had major repercussions in the United States. A generation ago, U.S. industry dominated the world's economy. American assembly lines, banks, and farms were the envy of the world. American workers had achieved a higher standard of living than their counterparts in other countries and looked forward to the future with confidence. Unfortunately, within the last few decades this picture of economic strength and optimism has given way to economic dislocation and uncertainty. Competitors from abroad are directly challenging U.S. producers in markets around the world, including the domestic market of the United States itself. These new challenges have had an impact on our trade and budget deficits, employment patterns, wage rates, and economic growth. To a significant extent, as foreign countries have gained a greater share of the world's manufacturing output, the future economic health of the United States depends on its leadership in technology and information-based industries.

Being successful in this radically new economic environment, where changing patterns of competitiveness and trade are the rule rather then the exception, will require a higher level of knowledge and understanding than ever before. The United States will need a workforce which understands the new economic order of worldwide competition and global markets. This course in "Global Economics" is designed to give students such knowledge and understanding.

The Thinking Behind the Specific Components:

1. Written and Oral Communication

Good written and oral communication is essential to survive as a productive citizen in today's world. Through the process of writing and rewriting, students will become more facile with their own language. The written and oral components may very well be best taught in combination with one another, as opposed to the isolated methods of the past. The fusion of oral communication with written communication is NOT seen, however, as a substitute for a speech course, but as an introduction to oral communication which we hope will alleviate some of our students' fears about public speaking.

Some practical questions this particular course structure might raise:

1. Who will be recruited to teach the course sequence that will replace English 101-102 and English 103-104?

English Department faculty would be invited to apply to teach the Written and Oral Communication course sequence. Faculty selected to teach would need to demonstrate (1) formal training in the teaching of writing; (2) a commitment to working with freshmen to improve the quality of their writing; and (3) a willingness to be trained in evaluating students' oral communication skills. Faculty housed in other departments who meet these criteria may also apply to teach these courses.

2. Six essays in two semesters, even with rewrite options, represent fewer papers than are typically required in English 101-102.

This is correct; however, the Task Force has specifically addressed this point by making all courses which satisfy the six-hour humanities and six-hour social science general education requirements writing intensive.

3. What about the philosophy that in order to write effectively one must be an effective reader?

We agree with this perspective. We also believe, however, that the introductory (communications) courses are not the only place where this philosophy should be implemented. *All* courses which satisfy the general education humanities and social science distribution requirements will require reading of original source materials. These readings will be carefully selected to reflect the preparedness of students to benefit from them. Some instruction on how to read an article or source will be given in the Written and Oral Communication sequence.

2. Mathematics

All individuals need basic mathematical skills to survive. The course recommended should sharpen those skills and increase the students' problem-solving and critical thinking skills. The specific components of this course -- statistics, probability, logic systems, and problem-solving -- were selected because national and local surveys of academic departments indicate that these areas are either essential to students' mastery of discipline-based objectives or to students' effectiveness as problem solvers and decision makers once they have graduated from college.

3. History of Western Civilization

History serves as both a mirror of our past and a prognosticator of our future. By understanding the world in its historical context, people are better able to understand and interpret today's world and to plan wisely for the future. The ability to shape our future intelligently and to comprehend other cultures requires that we understand our own historical roots, the sources and development of those patterns of thought and systems of values which form our civilization. This course is based on the premise that the past should be connected to the present, to make the present intelligible and to show our students where they fit into the patterns of history. On a more specific level, local assessment data clearly indicate that, while CNU students are relatively aware of current events, they lack a basic knowledge of history prior to World War II. The Task Force believes that the educated person not only has knowledge of historical events, but also an appreciation of how one evaluates the causes of change.

4. Science

Science and technology have become major forces in the world today. It has become increasingly difficult to make informed decisions on many aspects of our lives or even to read the newspapers without a solid background in the sciences. The general education science courses have been designed to promote scientific literacy to enlighten students about the place of science in their world. Critical thinking and problem-solving skills learned in these courses can be applied to many other facets of their lives.

5. & 6. Social Science and Humanities

The Humanities and Social Science components reflect the idea that general education may have interdisciplinary components when these components serve a coherent and cohesive theme and do not exist simply for the sake of crossing disciplines. These courses also reflect a conviction that general education ideally should do two complementary things: provide students with a coherent view of the overall context of human experience in an integrative study (history of western civilization) and then permit students to go into several facets of this experience in some depth (the humanities and social science components). This approach would also serve another goal in that the student's experience of general education would be more exciting and interesting. We should try to get students out of the habit of treating general education as just something "to get out of the way."

7. Global Economics

The Task Force recommends a course in global economics as opposed to specific course work in political science, psychology or sociology because, in our changing times, economic contingencies are frequently the primary factor in political, psychological, and social change. That is not to say that political science, psychology or sociology are subordinate to economics; however, our recommendation reflects how strongly we believe that the knowledge gained from the global economics course is crucial to the survival of an educated person.

An understanding of economics is necessary for students to truly comprehend what is going on in their world. Nothing operates in our public or private sectors without affecting or being affected by the economy. Given our "borderless" society and the emphasis placed on international perspectives by both our nation and our academic institution, we cannot ignore the foundations of all global activity - simple economic theory.

An understanding of the economic environment is necessary to enable our students to grapple with the realities of daily life - unemployment, wage rates, taxation, trade and budget deficits, supply and demand, inflationary and recessionary periods, and global competition. A course in global economics which will address both U. S. economic issues as well as economic issues around the world will broaden the students' understanding of the impact of domestic and world events.

Economics is the foundation to our ever-changing world. The global economy has had a profound effect on our American standard of living - our jobs, our income levels, our overall quality of life. Therefore, it has become imperative for our students to investigate and understand these economic theories formally in order to be better prepared to work and contribute to our nation as a whole.

8. Language

It appears to the Task Force that there are two alternative goals for a foreign language requirement. One is to teach competency in using and fluency in speaking a language. The other is to introduce students to another language and culture and to identify those students who have some facility and interest in learning another language. We operated on the basis of the second goal. That is why a student who has already had significant language training before entering CNU has already satisfied the language goal of general education. We believe, of course, that there are programs and majors which should and will require further language training, the requirement we have outlined is simply the general one for all majors.

9. University Experience

The university experience will serve as the students' general introduction to college and specific introduction to CNU. Basic skills and tools that all college students need will be covered in this course. Only by introducing students to all we have to offer can we expect them to take advantage of all of the opportunities afforded them at CNU.

10. Capstone

This requirement is congruent with the principle that general education should go beyond the first two years and include a more sophisticated component than introductory courses. From a practical perspective, since so many of our graduates transfer into the University with some or all of the general education components satisfied, a student's last 60 hours may be more important to us in putting a CNU stamp on our graduates than the first 60. To this end, the Capstone Course is very important, incorporating the skills (writing, critical thinking, etc.) fostered throughout the general education experience and focusing on ethical thinking at a time when the students are more mature and better able to handle such questions than they were as freshmen. The Task Force has tried to weave integrative elements into the curriculum throughout; the Capstone Course is therefore quite literally what the course title means.

GENERAL EDUCATION PROPOSAL

Attached is the General Education proposal being submitted by the Undergraduate Curriculum Committee (UCC) to the Faculty Senate. This proposal consists of General Education Goals as derived from the new Mission Statement of CNU, General Education Requirements and the courses to fulfill these requirements, and a timetable for implementing this General Education Curriculum. Also, an addendum containing examples of the course loads for various majors under the present and the proposed General Education requirements is provided.

In the spring of 1994, the Provost, upon the UCC's recommendation, created and charged a task force with evaluating the current General Education Curriculum and reporting its findings to the UCC at the beginning of the Fall semester. The task force's report, a proposal for the restructuring of General Education, was submitted to the UCC and distributed to the faculty. The UCC then held open hearings and solicited written comments on the task force's proposal and general education in general. In the 12 hours of open hearings 36 individuals spoke. Most of the presenters also provided written comments, as did two additional individuals and three departments. These written comments, the tapes of the open hearings, and the documentation and research of the task force are available for review.

The UCC began its deliberations with the University's Mission Statement and constructed goals that were clearly derived from the mission and that took into account the concerns expressed by the faculty. From the goals, the curriculum areas necessary to meet these goals were identified and the courses and credits in each area determined. Finally, the UCC devised a timetable that could be used to implement this curriculum, a timetable that would permit the UCC to evaluate the appropriateness of existing courses to the new curriculum structure and allow the development of new courses for use in general education.

Undergraduate Curriculum Committee November 1, 1994

The primary goal of General Education is to provide a strong foundation that will prepare students to be successful in their majors, to become informed and productive members of society, and to continue as active learners. To achieve this goal, General Education is designed to develop in students the following:

- 1) The ability to communicate with words and numbers.
 - a) To write and speak clearly and effectively in English.
 - b) To convey numerical information clearly and effectively.
- 2) The ability to analyze, interpret, and think critically.
 - a) To understand and apply effectively mathematical concepts and methods.
 - b) To understand and apply effectively scientific concepts and methods.
 - c) To analyze, interpret, and evaluate logically and effectively verbal, written, and numerical information.
- 3) An understanding of the nature and role of science in society.
 - a) To understand the historical aspect of science.
 - b) To understand the impact and limitations of science and technology.
- 4) A global perspective of the world's history, cultures, and societies.
 - a) To understand our common heritage.
 - b) To understand diversity in the world.
 - c) To understand the foundations, structures, and processes of contemporary societies.
- 5) An understanding of the role of ethics in modern society.
 - a) To understand ethical decision making.
 - b) To understand the impact of ethical principles and decisions on society and individuals.
- 6) An understanding of health and wellness.
 - a) To understand what promotes well-being.
 - b) To understand what endangers well-being.

GENERAL EDUCATION COURSES AND GOALS

<u>Requirements</u>	Credits,	Goals	**
ENGL 101-102/103-104	6	1a, 2c, 5a	<u> </u>
MATH 105 or 135 or 140	3(4)	1b, 2a, 2c	
HLTH 200 ¹	2	5a, 5b, 6a, 6b	
SCIENCE BIOL 107-108, CHEM 103-104, or PHYS 103-104, each semester with a .5-credit laboratory component ² or	72	1a, 1b, 2a, 2b,	2c, 3a, 3b,
BIOL 107/107L-208/208L, CHEM 103/103L-104/104L, or PHYS 201/201L-202/202L	(8-10)		
SPEECH/CRITICAL THINKING	3 2	1a, 2c	
HIST 111G-112G ⁴	6	2c, 4a, 4b, 4c,	5a, 5b
SOCIAL SCIENCE Any 6 credits from the following: ANTH 203G-204G, ECON 201G, 202G, GOVT 103G, 104G, SOCL 201G-202G.	6	2c, 4a, 4b, 4c,	5a, 5b
HUMANITIES Any 6 credits from the following: ENGL 207G, 208G, FNAR 201G-202G, MLAN 205G, 206G, MUSC 207G-208G, PHIL 201G, 202G, RSTD 211G, 212G, THEA 210G-211G.	6	2c, 4a, 4b, 4c,	5a, 5b

Notes Notes

- 1. HLTH 200 will serve as the basis of a course that will deal with health, fitness, wellness, diet and nutrition, substance abuse, exercise, stress, and other health-related topics. This course will count as part of the 120 credits for graduation.
- 2. Courses such as BIOL 107-108, PHYS 103-104, and possibly CHEM 103-104 will be modified to address the goals listed. The laboratory component will consist of 4 exercises conducted each semester. The two-semester sequences with 1- or 2-credit laboratory components both semesters will also satisfy this requirement.
- 3. This course should prepare students to think critically, analyze and interpret oral information, and communicate orally. (During the transition period, SPCH 201 will be used to fulfill this requirement.)
- 4. Global History with significant coverage of Western History.

DEGREE REQUIREMENTS (Previously Area IV)

BA degrees--A Foreign Language through 102 (using current placement procedures).

BS degrees--A two-course sequence with laboratories in a science different from that taken for General Education science requirement: BIOL 107-108, BIOL 107-208, CHEM 103-104, CHEM 121-122, PHYS 103-104, PHYS 202-202.

Professional degrees (BA in Leisure Studies, BA in Social Work, BSA. BSBA, BSGA, BSIS, BSN, and BM)--These degree programs would need to supply to the UCC the standards or accreditation requirements to which they adhere, along with a description and/or plan for how they meet these requirements.

TIMETABLE

If approved for implementation, this General Education Curriculum could be put in place for 1995-1996 using existing courses as indicated. During the spring of 1995, the UCC would develop the framework and guidelines with which existing and new courses (see below) would be evaluated for inclusion in this curriculum. This information would be distributed to departments before the end of the semester so that both existing and new courses, in order to continue to be part of or to be added to General Education, could be presented to the UCC for evaluation. This would occur during the fall of 1995 and the early part of 1996, allowing full implementation of the curriculum to occur in 1996-1997. (This first evaluation of courses in the General Education Curriculum would be used as a basis for establishing the procedure for conducting regular examination of General Education—its goals, curriculum, and assessment. In consultation with the Student Assessment Committee, guidelines and procedures for evaluating the effectiveness of this curriculum would be established.)

Using the General Education goals as guidelines, new courses in the SCIENCE, SPEECH/CRITICAL THINKING, SOCIAL SCIENCE, and HUMANITIES areas would be solicited. Because the requirements for the SOCIAL SCIENCE and HUMANITIES areas can be satisfied by either a 2-course sequence in one discipline or two courses from different disciplines, one semester courses would be encouraged. Also, it is hoped that these new courses and all general education courses would address goals other than those indicated in this proposal, where appropriate.

Finally, all degrees and majors would need to evaluate their programs to reflect the new General Education requirements. Revised curricula and planning sheets should be prepared. Where implementation of the new General Education requirements has only the impact of generating available credits for electives, no plans need to be submitted to the UCC. Where implementation causes other changes to be made, such changes would need to be reviewed and approved by the UCC. It is anticipated that most of these changes would be of a routine nature and would be reviewed and approved in a timely fashion.

ADDENDUM

One of the UCC's goals in the development of the proposed General Education Curriculum was to free hours for intro-to-discipline courses, support courses, and electives. These freed hours may be of value as majors and degrees consider their requirements in light of the proposed curriculum.

For current requirements, the numbers listed in GE include the math option (Area I) and the natural science option (Area II) appropriate to the major. For majors, the maximum number of hours includes all those listed as Area V in the catalogue with NO overlapping credits; the minimum hours are based on maximum overlap with Areas I and II. The requirement for graduation under the current system is 120 hrs + PE; the total under the proposed system is 120 hrs including HLTH.

NOTE: the following are rough estimates for comparison purposes only.

Graduation Requirements for Bachelor of Arts Degree

	•	
B. A. in Fine & Perf ArtsCommunication CURRENT GE (incl degree reqs) 59 + PE major courses min 36 max 42 total GE/major min 95 max 101 + PE support/electives min 19 max 25	PROPOSED GE (incl HLTH/degree reqs) 44 major courses min 36 max 42 total GE/major min 80 max 86 support/electives min 34 max 40	
B. A. in EnglishLiterature CURRENT GE (incl degree reqs) major courses min 33 max 39 total GE/major min 92 max 98 + PE support/electives min 22 max 28	PROPOSED GE (incl HLTH/degree reqs) major courses min max 39 total GE/major min max 83 support/electives min max 37	
B. A. in Modern Foreign LangFrench CURRENT GE (incl degree reqs) 59 + PE major courses min 36 max 51 total GE/major min 95 max 110 + PE support/electives min 10 max 25	PROPOSED GE (incl HLTH/degree reqs) 44 major courses min 45 max 51 total GE/major min 89 max 95 support/electives min 25 max 31	
B. A. in Philosophy CURRENT GE (incl degree reqs) major courses min 24 max 30 total GE/major min 83 max 89 + PE support/electives min 31 max 37	PROPOSED GE (incl HLTH/degree reqs) 44 major courses min 24 max 30 total GE/major min 68 max 74 support/electives min 46 max 52	
B. A. in Political Science CURRENT GE (incl degree reqs) 59 + PE major courses min 30 max 36 total GE/major min 89 max 95 + PE support/electives min 25 max 31	PROPOSED GE (incl HLTH/degree reqs) 44 major courses min max 36 total GE/major min max 80 support/electives min max 40	

B. A. in PsychologyI/O CURRENT GE (incl degree reqs) 59 + PE major courses min 41 max 47	PROPOSED GE (incl HLTH/degree reqs) major courses min max 47
total GE/major min 100 max 106 + PE	total GE/major min max 91
support/electives min 14 max 20	support/electives min max 29
	•
	•
B. A. in Sociology	PROPOSED
CURRENT	PROPOSED
GE (incl degree reqs) 59 + PE	GE (incl HLTH/degree reqs) 44 major courses min 33 max 39
major courses min 33 max 39.	major courses min 33 max 39 total GE/major min 77 max 83
total GE/major min 92 max 98 + PE	support/electives min 37 max 43
support/electives min 22 max 28	
	10 Sec. 10 Sec
B. A. in Biology	
CURRENT	PROPOSED
GE (incl degree reqs) 59 + PE	GE (incl HLTH/degree reqs) 44
major courses min 59 max 65	major courses min 62 max 68
total GE/major min 118 max 124 + PE	total GE/major min 106 max 112
support/electives min 0 max 2	support/electives min 8 max 14
The state of the s	F.F.
Graduation Requirements for B	achelor of Science Degree
	St. Land
B. S. in Biology	
CURRENT	PROPOSED
GE (incl degree reqs) 60 + PE	GE (incl HLTH/degree reqs) 48
major courses min 51 max 54	major courses min max 54
total GE/major min 111 max 114 + PE	total GE/major min max 102
support/electives min 6 max 9	support/electives min max 18
	to the second
B. S. MathBlock B	• • • • • • • • • • • • • • • • • • • •
CURRENT	PROPOSED
GE (incl degree reqs) 58 + PE	GE (incl HLTH/degree reqs) 48
major courses min max 56	major courses min max 56
total GE/major min max 114.+PE	total GE/major min max 104
support/electives min max 6	support/electives min max 16
	,
B. S. in Applied Physics	
CURRENT	PROPOSED
GE (incl degree reqs) 58 + PE	GE (incl HLTH/degree reqs) 49
major courses min max 59	major courses min max 59
total GE/major min max 117 + PE	total GE/major min max 108
support/electives min max 3	support/electives min max 12
	·
B. S. in Computer Science	
CURRENT	PROPOSED
GE (incl degree reqs) $58 + PE$	GE (incl HLTH/degree reqs) 48
major courses min max 49	major courses min max 49
total GE/major min max 107 + PE	total GE/major min max 97
support/electives min max 13	support/electives min max 23

-	ements for Professional Degree	
B. of Music	PROPOSED '	
CURRENT	GE (incl HLTH/degree reqs) 38	
GE (incl degree reqs) 56 + PE		=
major courses min 87 max 106	major courses min 87 max 106 total GE/major min 125 max 144	
total GE/major min 143 max 162 + PE	support/electives min 0 max 0	r
support/electives min 0 max 0	supportretectives that o max o	
B. S. Accounting	·	٠.
CURRENT	PROPOSED	
GE (incl degree reqs) 56 + PE	GE (incl HLTH/degree reqs) 38	
major courses min 57 max 64	major courses min 64 max 76	
total GE/major min 113 max 120 + PE	total GE/major min 102 max 114	
support/electives min 0 max 7	support/electives min 6 max 18	
B. S. B. AManagement		
CURRENT	PROPOSED	٠,
GE (incl degree reqs) 56 + PE	GE (incl HLTH/degree reqs) 38	
major courses min 51 max 60	major courses min 54 max 60	`.
total GE/major min 107 max 116 + PE	total GE/major min 92 max 98	
support/electives min 4 max 13	support/electives min 22 max 28	
D. C. C. A. C. S. L. Tradia.		
B. S. G. ACriminal Justice CURRENT	PROPOSED	
·	GE (incl HLTH/degree reqs) 38	•
GE (incl degree reqs) 56 + PE major courses min 39 max 45	major courses min max 39	
total GE/major min 95 max 101 + PE	total GE/major min max 77	
support/electives min 19 max 25	support/electives min max 43	
support/cicotives min 15 max 25		
	•	
B. A. Social Work		į
CURRENT	PROPOSED	
GE (incl degree reqs) 56 + PE	GE (incl HLTH/degree reqs) 38	
major courses min 48 max 68	major courses min 48 max 52	
total GE/major min 104 max 124 + PE	total GE/major min 86 max 90	
support/electives min 0 max 16	support/electives min 30 max 34	

Combined Requirements for Graduation and Certification

	•
B. A. in EnglishLang Arts (5-8) w/Lang. Arts and Soc. S	Sci core areas
CURRENT	PROPOSED
GE (incl degree reqs) 59 + PE	GE (incl HLTH/degree reqs) 44
major courses min 33 max 39	major courses min max 39
education courses 30	education courses (+PE activity) 30
total GE/major/ed min 122 max 128 + PE	total GE/major/ed min max 107
support/core areas min 12 max 45	support/core areas min 22 max 51
total hours min 134 max 173	total hours min 29 max 158
total nodes	
·	
B. A. in History (9-12)	
CURRENT	PROPOSED
GE (incl degree reqs) 59 + PE	GE (incl HLTH/degree reqs) 44
major courses min 30 max 36	major courses min 30 max 36
education courses 29	education courses (+PE activity) 29
total GE/major/ed min 118 max 124 + PE	total GE/major/ed min 103 max 109
support/electives min 33 max 44	support/electives min 42 max 50
total hours min 151 max 168	total hours min 145 max 159
total flours final 131 max 100	
B. A. in PsychologyEarly Childhood (NK-5)	
CURRENT	PROPOSED
GE (incl degree reqs) 59 + PE	GE (incl HLTH/degree reqs) 44
major courses min 32 max 35	major courses min 38 max 41
education courses 31	education courses (+PE activity) 33
total GE/major/ed min 122 max 125 + PE	total GE/major/ed min 115 max 118
support/core areas min 24 max 27	support/electives min max 26
total hours min 146 max 152	total hours min 141 max 144
iotal flours film 140 max 132	total floats
B. S. in Biology (9-12)	•
CURRENT	PROPOSED
GE (incl degree reqs) 60 + PE	GE (incl HLTH/degree reqs) 48
major courses min 51 max 54	major courses min max 54
education courses 29	education courses 29
total GE/major/ed min 140 max 143 + PE	total GE/major/ed min max 131
support/electives min 8 max 8	support/electives min 8 max 8
total hours min 148 max 151 +PE	total hours min 139 max 139
total flours mini 146 max 131 1 1 E	total hours min 137 max 137
B. S. in MathBlock D (9-12)	
CURRENT CURRENT	PROPOSED
GE (incl degree reqs) 58 + PE	GE (incl HLTH/degree reqs) 48
major courses min max 38	major courses min max 38
education courses 29	education courses 29
total GE/major/ed min max 125 + PE	
support/electives min max 8	support/electives min max 11
total hours 137	total hours 126

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ANNEX SEVEN

CNU On-Line

Excerpts from Addendum Request Number 2 - 1994 Session

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CHRISTOPHER NEWPORT UNIVERSITY (242)

Addendum Request

Addendum Request Number 2 CNU On-Line

Proposed Services

The goal of CNU On-Line is to make distance learning an option at Christopher Newport University so that students in certain majors, by the end of the 1994-96 biennium, will be able to take all the courses necessary for a bachelor's degree over a computer-managed communication system. It is the intention of the project to set up the conditions for a process that will become self-sustaining and self-supportive. Increase in the quality of education, the more efficient use of time and resources, the reduction in costs, and increased productivity, will be natural incentives to faculty and staff to use, expand, and improve the technology. CNU On-Line will recruit faculty to redesign their existing courses to be delivered over a computerized bulletin board system. During the first two years of the project, instructors will be given release time to convert their courses from a classroom to a distance learning format. The goal of the first two years is to redesign enough courses from the general distribution requirements so that an entire baccalaureate degree can be taken through the distance learning format and to target certain majors such as Governmental Administration for a complete distance learning degree. The goal of the second biennium is to continue adding courses from the curriculum to the distance learning course offerings and to coordinate administrative and student services to incorporate computer- managed communication technologies. By the third biennium, CNU On-Line will be prepared to take advantage of the full range of information technologies that will result from the use of ISDN (Integrated Services Digital Network) and high bandwidth fiber-optic telecommunications. All existing technologies will be made obsolete in six years with the emergence of these new technologies. The modest sums spent more to prepare for the use of these new platforms will enhance the efficiency of general fund dollars spent in the coming biennia.

Statement of Need

Problems Addressed

The resources of higher education are being stressed by higher costs, increased enrollments, the exponential growth in information, and the diverse and non-traditional character of today's student population. These factors are interrelated. The higher costs are a result of accommodating more students, and enlarging systems for acquiring, storing, and delivering information. The traditional methods of supplying information and instruction, by constructing dormitories and classrooms, hiring faculty, increasing library holdings, etc. are inadequate for handling the new demands without significant new or increased taxes.

The market has been enlarged by returning students who are responding to rapid technological changes occurring in their professions and who are expecting higher education to provide the latest in skills and information. Increasing numbers of students with full-time jobs, parents with young children, and senior citizens are returning to school. They demand effective learning to be delivered in an efficient manner.

The traditional college student recently out of high school and completing a bachelors degree within four years is becoming less the norm. Many are not able to live in dormitories on residential campuses and concentrate their full-time energies to their studies. Increasingly, students live at home, work full-time, and obtain an associates degree while attending classes part-time. The costs related to obtaining a bachelors degree are moving outside the reach of these students, while classroom hours demand work schedules that employers are not able to accommodate. If the Commonwealth is to serve these citizens, it must find ways to deliver relevant, cost efficient and flexible public education.

Colleges and universities are no longer the principal arena for providing the rite of passage into the customs and practices of society for adolescents and young adults. An increasing portion of students are already involved in learning systems in business and industrial sectors where they are earning a living and earning the money for rising tuition cost. Higher education is under an increasing pressure to provide up-to-date knowledge in fields that are undergoing changes that render what has been learned obsolete in a time scale whose units are measured in months rather than years.

The classroom as the traditional method of delivering knowledge cannot by itself meet the needs of the current population of students. It has become an informational and instructional bottleneck. Moreover, the classroom as a venue for student-teacher interaction cannot accommodate the great diversity of students that result from different levels of skill, preparation, motivation, and scheduling problems.

At the same time, there are major changes taking place in telecommunications for which higher education must prepare. Early in the twenty-first century, high bandwidth fiber-optic technologies will be providing text, video, and interactive multimedia services. The 1990's will begin to see the use of ISDN (Integrated Services Digital Network), which will use existing voice lines to transmit voice, image, and video. It will be possible to provide multimedia information services directly into homes, schools, and businesses during the decade of the 90's. University graduates who enter business and industry without interactive computer skills will be at a disadvantage. The essential problem is how to meet the increased demand for the services of higher education institutions in the twenty-first century in an environment of rising cost, diverse student preparation and motivational levels, and increasing technological sophistication. The problem is how to re-design educational processes in order that institutional effectiveness is improved, more access is provided to students with diverse needs, operational efficiency is improved by making tuition and fees more affordable, and institutional programs and student performance are held accountable by adequate assessment measures.

The Digital Revolution

The computer is transforming the way information is processed. The essence of the computer revolution is not electronic. Computers could be designed from optical or hydraulic circuits through which the light or fluids move, instead of electricity. The real revolution is linguistic. The computer allows for natural and formal languages to be efficiently and economically encrypted into binary code. Binary code consists of 1's and 0's and every statement in literature and science can be translated into it. The significance of the binary code is that its analog in the machine is the on-off switch. The great technological achievement in electronics in the latter half of the twentieth century was the invention of the transistor and the integrated circuit. Current technology packs billion of switches per cubic inch. The state of each switch corresponds to a 1 or 0 in binary code and a sequence of 1's and 0's corresponds to a string of alpha-numeric signs. Strings of alpha-numeric signs are the balances in bank accounts, the plays of Shakespeare, the entries in card-catalogs and on-line encyclopedias, or what, in other words, has come to be known as "information".

The encrypting of language into machine manipulable binary code is as revolutionary for the technology of written language as was the invention of movable type. Just as the printing press caused the disappearance of the medieval scriptorium, the STORING, COPYING, SEARCHING, RETRIEVING, AND TRANSMITTING of digital texts is making the traditional technology of the printed book obsolete. The storage of electronic texts is reliable and economical. Paper is bulky and perishable and requires the huge cataloging and storage facility of the traditional library. The continuous shelving and unshelving of books is labor intensive. The storage of electronic texts takes little or no space. The cataloging, classification, copying, retrieving and searching of electronic texts is automated and instantaneous. The clear advantages of digitized over printed text is forcing the reconceptualizing of copyright law, property rights, and authorship.

The breakthrough in the use of digital technologies is about to occur with high volume digital signals reaching residential homes. The standard phone line carries 10,000 bits per second. Millions of bits per second can be transmitted through fiber optic cable and through cables used by cable-television companies. However, it is possible to send more data through standard phone lines. The method for doing this is called ISDN (Integrated Services Digital Network) which digitally creates a channel that has a capacity of approximately 150 kilobits-a-second. Combined with data-compression techniques it offers the minimum capacity necessary to carry full multi-media including voice, text, image, and video transmissions.

Alternative Solutions

Three program alternatives are analyzed: (1) the electronic bulletin board that uses telephone lines for interactive exchange of information and learning exercises, (2) electromagnetic spectrum technology that uses wireless transmitters and receivers for transmission of lectures and images, and (3) the traditional classroom with lecture/discussion organized and conducted by an individual professor.

Alternative One: Learning Systems Managed By Computer Networked Electronic Bulletin Board, or CNU On-Line.

The centerpiece of CNU On-Line, is the electronic bulletin board, with a computer-managed message system that allows for discussion among students and instructor 24 hours a day. 7 days a week. The electronic bulletin board is a file and message handling program that is able to give callers access to programs run on remote computers. All qualified students with a computer and modem can participate in a learning environment as readily as if they were on campus. Computers with modems are already available in homes, business locations, military installations, and at Virginia colleges and universities. The last two years of baccalaureate programs in business and public management, engineering, nursing, and liberal arts curriculum can be made accessible to community college students in their homes. The electronic bulletin board, a species of computer-managed communications, permits messages to be listed on the bulletin board by sender, subject, and time. Callers to the bulletin board can read, download, and reply to messages. They can select messages according to different parameters that are a function of date, subject matter, and person. Callers can send private or public messages and leave comments for the instructor. Lengthy and extended research can be uploaded and downloaded as files rather than messages. The instructor has complete access to information on all the activity on the bulletin board such as the number of messages that individual callers send and receive, the number and size of files that are downloaded and uploaded, etc. The instructor has the option of different methods of contacting students over the bulletin board in addition to messages such as bulletins, news items, questionnaires, logon and logoff notices. An instructor can register students from a home computer, change passwords and security levels, update news items, etc. Information on all activities on the bulletin board is contained in ASCII files, which can be processed by programs specifically designed for analyzing bulletin board logs. Records are kept of the number of times students logon to the bulletin board, the number and length of the messages they leave and receive and on the content of the messages. The electronic bulletin board allows the remote use of educational programs that can run on the same operating system as that of the bulletin board. Students can remotely take tests, answer questionnaires, use simulations, read annotated texts, submit their writing to grammar and spell checkers. Besides classes, the bulletin board can be designed to support extensive libraries, faculty forums, community forums for professions in business, government and medicine. This alternative will provide student support services on-line so that students will be able to enter the University, register, receive advising, pay bills and obtain career counseling and other services. The linking of all services into an integrated network will reduce future staffing demands while facilitating citizen access to the system. As electronic texts are made available to learners, CNU On-Line will significantly increase access to resource materials and information. This service directly supports the manufacturing, scientific, commercial and government efforts in the region, while reducing the need for printed materials and their storage.

The first alternative utilizes the existing educational facilities and is integrated into the operation of already available physical and personnel support facilities. It is clearly the most cost efficient and effective delivery system of the three alternatives.

An alternative to using the telephone lines is to use the electromagnetic spectrum to transmit one dimensional, non-interactive televised classroom instruction. Specialized laboratories would be provided at community college sites to receive signals transmitted via satellite. Receiving classrooms and at least one computer laboratory would have to be developed at each site to support information access and training. At the transmission source, construction of facilities to house electronic classrooms, teleconferencing rooms for advising, communication equipment, computers and offices for support personnel are needed.

This second alternative essentially designs and constructs a different and separate educational enterprise which interfaces with the traditional and existing facilities in limited ways. This alternative is a very expensive add-on to the present delivery system. It does not provide a flexible alternative to meet the needs of non-traditional learners, nor does it provide a cost efficient approach to meet the Commonwealth's projections of revenue stress and citizen demands in the coming decade. It is likely that the wireless transmission of video signals will be eclipsed by services that will follow in the wake of implementation of fiber-optic, ISDN technologies, and the expansion of networks like Internet.

The electromagnetic spectrum is a scarce resource; many interests are competing for its use such as television channels, radio stations, mobile pagers, citizen band, and even the wireless home phone. A wireless technology is inherently limited and cannot promise any significant expansion. It suffers from what is known as "spectrum crowding." The more urban the area, the greater the problems. It is always possible, however, to install another telephone line.

Because of the limitations of bandwidth in the case of wireless video transmission there are not enough channels to allow the many receivers to communicate with the sender. Despite creative efforts to make it otherwise, the essence of the technology is such as to render communication of this kind one-directional. It possesses all the limitations of the traditional classroom, with the addition that the presence of the instructor is reduced to a two dimensional image on a television screen with whom truly interactive communication is essentially impossible. Although successful for purposes of entertainment, television is a notoriously poor medium of education because it is non-interactive. It renders its audience passive. Few things are as clear in education as the principle that the educational environment must be able to change in a way that is responsive to the actions of the learner. That means that the channel of communication must be wide in both directions. The problem, in fact, is not with the television image, but with the limitations of wireless communication. The transmission of video images that will occur in the next two or three years for a large portion of the United States with (ISDN) Integrated Services Digital Networks, and eventually with fiber-optic lines, provided by telephone companies, will allow for full interactive video. Students will not only be able to call into the bulletin board for interactive messages but will be able to pass through the bulletin board to use multimedia programs.

At present, bulletin board technology is capable of supporting text-oriented educational software. The use of telephone lines brings the data into the student's home. By comparison, the use of satellite technology requires expensive receiver sites located on campuses.

Because the site which receives the signal is not the student's residence, satellite technology suffers from the same limitations of time and place that are imposed by the traditional classroom. It still puts the student at a distance from the place of instructional and informational delivery.

Alternative Three: Traditional Classroom Instruction

Another alternative to the CNU On-Line proposal is to do nothing as far as applying new technologies to solving the problems of increasing costs and enrollments. The only option which that leaves open is creating more classrooms by constructing more buildings, and hiring more staff and faculty. Such a policy is committed to the classroom as the primary method of delivering information. However, the classroom with rows of desks facing a lectern is a carry-over from pre-print text technology. Its clearest and most appropriate function was the verbatim reproduction of texts read from a lectern. In the age of print-technology, it served as a means of disambiguating writing, which lacked the full inflection of the spoken word and the rhetorical force of situation and context. However, as a learning environment, the classroom is limited. When the enrollment in the classroom increases, the opportunity for individualized interaction decreases. Enrollment, for classroom-based teaching, is inversely proportional to quality, unless the student brings to the classroom a high level of competence and motivation. An educational institution which is committed to classroom instruction has as its only option for increasing the quality of education, increasing the number of classrooms and instructors. Quality is prohibitively costly for an institution that is wedded to traditional classroom paradigms. Given the fiscal constraints upon the Commonwealth in the coming decade, expansion of this delivery format does not seem realistic.

Consequences if Not Funded

If institutions of higher learning do nothing as far as developing the technology and infrastructure needed for managing and delivering digital information and instruction, they will find themselves wholly unprepared to deal with the telecommunication and information environment at the beginning of the 21st century - a time that will see the proliferation of residential multimedia data services. Unless public education, committed to democratic ideals and freedom of expression, takes an aggressive posture with regard to these new technologies, more aggressive private profit and non-profit organizations will become the primary educational providers. To wait until other sectors of society provide the research and development needed to accomplish this, will likely place CNU and other public institutions in the inferior position of continually struggling to reach a point from which others have already advanced.

Anticipated Results

Relevant Criteria

The proposal can be critiqued using criteria or goals, including institutional and program excellence and effectiveness, accessibility for students with limited financial and mobility resources, cost effectiveness and operational efficiencies, and procedures and measures for assessing the value and productivity of the outcomes of programs.

- 1. Institutional and program excellence and effectiveness: The quality of educational services will be measured in terms of the increase in the number of degrees earned and in the decrease in the attrition rate for full-time and part-time students during the period of 1994-95 to 1999-2000.
- 2. Increased accessibility for students with financial and mobility problems: By the year 2000 the recruitment of students will reflect the demographic diversity which approximates the demographic characteristics of secondary school graduates from high schools certified by the Virginia Department of Education as well as reflect representation from all regions of the Commonwealth.
- 3. Cost effectiveness and operational efficiencies: This can be measured in terms of the reduction in the direct costs of instruction per FTE student and in terms of reductions in pressures for capital improvements.
- 4. Procedures and measures for assessment of outcome performance: During the period of 1994-1995 to 1999-2000 procedures for assessing performance will be integrated with learning processes and serve as a condition for admission to course and program participation. A permanent electronic transcript of all proceedings of student-to-student and all student-to-teacher interactions, all learning exercises, and testing devices with outcomes will be available for scrutiny by third party disinterested analysts.

Application of Criteria to CNU On-Line

1. Institutional and program excellence and effectiveness:

The method of teaching over the electronic bulletin board differs from traditional classroom instruction. The emphasis of bulletin board instruction is peer tutoring and cooperative learning, that is, students teaching, and learning from students. The role of the instructor is that of facilitator, discussion moderator, resource person, research director, evaluator, etc. The roles of learner and teacher are more flexible than in the regular classroom.

Placing the entire responsibility for teaching on the instructor is a cost-intensive form of education and is an environment that discourages students from becoming active learners - learners who are able to develop strategies and habits for quickly and selectively acquiring information. One goal of education that is clearly fostered on

the bulletin board system is that of students becoming independent learners who are able to teach themselves.

2. Accessibility for students with financial and mobility problems:

CNU On-Line makes public education available to those who are not only place bound but home bound. The technology needed to connect with CNU On-Line is affordable for both the instructional institution and the learner. Since the electronic bulletin board is open 7 days a week, 24 hours a day, course work on the bulletin board can be scheduled in order not to interfere with work and family commitments. The hours spent driving to and from the classroom have no educational value, and are arguably a civic and ecological liability, yet the traditional classroom makes travel time an unavoidable part of the educational process. CNU On-Line allows the reception site to be the learner's home or place of work. Convenience translates into time and time translates into greater productivity for the learner.

Bulletin board technology makes the services of higher education available to diverse markets at affordable cost to those consumers with the least ability to finance their needs. The following are some examples of types of markets that need immediate attention:

- (1) <u>Community College Graduates</u>. The continued educational development of many community college graduates is cut short because they cannot afford to leave their local communities to travel or move to senior colleges and universities to complete their degree work.
- (2) <u>Corporate Users and Government Employees</u>. Many corporations want their employees to further their education. But time and distance constraints have kept many employees from going to or finishing college.
- (3) Homebound and Disabled. For many homebound and disabled individuals, travel to and from a college classroom is difficult or impossible. University buildings have been remodeled to reduce the problems of making educational facilities accessible to such students. For a homebound or disabled person with a computer and modem, it is possible to get a college education without the difficulties involved in travel and transportation.
- (4) <u>Parents With Small Children</u>. The possibility that a college education could be had from the home will encourage parents with pressing family responsibilities to seek or complete their college education and allow them to become an integral and vital part of the larger society.
- (5) <u>The Elderly</u>. The bulletin board can also be source of communication with others for those who are isolated, and an opportunity for the young to gain knowledge from those who are experienced.

- (6) <u>High School Honors Students</u>. Many students who excel in high school exhaust the resources of high schools before they graduate. Having courses available by modem would allow students in high school to begin taking some basic college classes before they graduate.
- (7) <u>Members of the military</u>. Relocation does not interfere with continued enrollment in CNU courses.

Funding Commitment

Operational cost and efficiencies

CNU On-Line will use commercially available bulletin board software running on networked PCs. The technology is familiar to the consumer market. It is available and inexpensive enough that thousands of electronic bulletins boards are being run by private individuals. It has been estimated that there were, by the end of 1991, 30,000 bulletin boards in the United States. It is difficult to be exact about the number of bulletin boards in use, since any individual, with a PC and software as inexpensive as word processing software and a telephone line can set up a bulletin board. A trade magazine such as Computer Shopper has page after page of bulletin boards advertised by individuals offering information services. It is now standard operating procedures for many corporations to provide customer service either by running their own bulletin board systems or by renting space on systems like Compuserve that can be reached toll-free nationally and internationally. Bulletin board software is as common as word-processing, spreadsheets, and database software. Classes that teach the use of bulletin board and communication software are being offered as continuing education courses. Cover articles are being written in leading magazines about the subculture that has developed as a result of the widespread use of computerized bulletin board systems. The technology has been subjected to the forces of a large commercial market, and these forces have reduced its price and improved its quality. Supporting software such as mail readers that automate the sending and receiving of messages and the uploading and downloading of files, and communications software specifically designed for use with computer bulletin boards, is produced by countless manufacturers. The use of expensive mainframe computers, with programming departments that write and maintain source code, is unnecessary. The issue of mainframe computers versus PCs in the case of bulletin boards is analogous to word-processing. Word-processing on mainframes is archaic by PC standards. conception of CNU On-Line takes full advantage of the large consumer market. The relationship of the university to computerized communication technology is analogous to the relationship of the university to the publishing industry.

At present, the CNU Department of Philosophy and Religious Studies and the Department of Government and Public Administration teach eleven to twelve courses using a computer bulletin board run on a single 486/33, which supports seven simultaneous users. The cost of the system was approximately five thousand dollars, including modems and software. The telephone lines, with one 800 number, cost about \$300 per month during the busiest of months. Over a four year period, assuming depreciation on equipment, the monthly cost to maintain seven lines is between \$300-\$400. Experience shows that two courses can comfortably be served per line although this varies with the nature of the course. The greatest expense is

the 800 number and there are ways of bringing this cost down as the number of courses on the system increases.

Since bulletin board technology is inexpensive, small four-year colleges and community colleges with limited budgets can offer distance learning courses. The technology that *CNU On-Line* will use is easily disseminated and distributed. A tape backup made of a ten node bulletin board, consisting of approximately 40 megabytes and capable of supporting at least fifteen courses could be taken from one machine and copied to a similar machine at another institution. The technology that *CNU On-Line* uses can easily be used by other educational institutions without making smaller institutions dependent upon the expensive technological resources of larger institutions.

The use of *CNU On-Line* technology has the potential of promoting the "horizontal integration", at multiple levels, of the Commonwealth's education system. It could have the effect of neutralizing spatial separation and permit collaboration among persons with similar needs and opportunities, not only at sister institutions, but among those at various levels from K-12 to graduate and professional institutions.

Measures for the Assessment of CNU On-Line

Provisions will be made for monitoring and evaluation of the electronic bulletin board as a medium for the delivery of educational services. Policy-analytic procedures will be used to produce information about the performance of policies used in satisfying the learner needs, institutional values, and technological opportunities that gave rise to *CNU On-Line*. The intent and design of the evaluation procedures will be to determine what difference the program makes in the output of services and the outcome for the participant's lives and well-being. Each year, from 1994-1995 to 1999-2000, the University's Assessment Officer will involve instructors, Department Chairpersons, Deans, and the Provost in an assessment process that measures the same variables used to assess the University's traditional program of instruction, but, in addition, compare the results. Because all instructional and learning activity of *CNU On-Line* is recorded digitally and automatically, the computerized bulletin board provides more hard quantifiable data for purposes of assessment than any other medium of instruction.

Concerns of the General Assembly

CNU On-Line addresses the concerns of the General Assembly as stated in paragraph E of the 1992 session budget bill, the legislative intent of which is "to effect long-term changes in the structure of higher education to minimize costs, as well as prepare for the demands of projected enrollment increases." Because the computer bulletin board is a highly interactive medium, and since the larger the class, the greater the interaction, the quality of education on the bulletin board tends to increase with increases in enrollment. Although the number of contacts between the instructor and the learner decreases as the enrollment increases, the number of contacts between learners increases. Because of the dynamics of sending and receiving messages, a concept exchanged between an instructor and an individual learner tends to be transmitted throughout the community of learners on the bulletin board. There is a process of natural selection that is at work that determines what themes dominate the discussions. The quality of work that a learner is producing can be seen as a function of how many messages

the learner is sent and how often their messages are quoted by others. The computer bulletin board is a real-life model of the society at large. It is a marketplace of ideas where the learner is forced to develop the social and linguistic skills needed to understand and influence others. The medium of the bulletin board is the written, rather than the spoken word, in a context that is rich in social dynamics. The learner develops the kind of writing and linguistic skills that are most likely to be useful after graduation. The literary genre of the computer bulletin board system is the message, which is a socially more relevant vehicle of communication than the standard essay and term paper, that has been the traditional student written product. Longer forms of writing can be uploaded and downloaded over the bulletin board. Feedback can be provided by editing computer files without the exchange of paper.

Since all communication over the bulletin board is digital, record keeping is automatic. The bulletin board keeps extensive records on the date and time the user has been on, the number of messages read and sent, the number of bytes uploaded and downloaded, the amount of time other educational software has been used. The caller's activity on the computerized bulletin board is completely transparent to the systems operator and to the instructor. This information is quantifiable and interpretable for grading purposes. An increase in enrollment does not produce increases in the labor devoted to record keeping.

The General Assembly wants the State Council of Higher Education, "to press for rigorous review..." A computer managed communication environment provides hard quantifiable data that can be used for purposes of review and assessment and judgments of productivity and efficiency.

The General Assembly wants higher education "to effect long-term changes." Society is moving toward developing systems that are more efficient at transmitting and managing information. Government initiatives at enlarging the information super-highways like Internet, and the telephone company's development of technologies for transmitting video signals are examples of these developments. CNU On-Line is a project that will place CNU in a position to take full advantage of these technologies as they unfold. Computer managed communications is not a short-term solution to the problems of escalating costs and increasing enrollments. It is part of long-term solution that is being embraced by the entire society toward automating the management of information. It is seen daily in computerized card catalogs at libraries, credit card gas pumps, and automated teller machines. The General Assembly is interested in reducing administrative support positions with "the intent of converting the positions to teaching positions." The great majority of these administrative positions are devoted to scheduling classes, processing teacher evaluations, managing library staffs that shelve and catalog books, recording grades, counseling students on distribution requirements, calculating wages, etc. Many of these tasks are being performed by individuals who have terminal degrees in their fields. Almost all of these functions can be computerized. The software has existed in the form of commercially available databases for many years. Educational institutions have been slow to utilize the technology because of academic values that are rooted in the technology of print. CNU On-Line is a project designed to stimulate a transformation from the printed to the digital text that will produce the computerization of administrative and support functions. The data that are being sent by the faculty to the deans, the registrar, the counseling center, and the various support services will be in a digital form that can be processed by a computer. In that

form the data become statistically relevant, interpretable, and useful for purposes of assessing efficiency and productivity and evaluating student and teacher performance. The solution that CNU On-Line proposes to problems of costs, increasing enrollments, and rapid advancements in telecommunications, is rooted in the technologies that have developed around the storage, manipulation, and transmission of digitally encoded data. The crudest method of transmitting digital data is to copy it to a disk, place the disk in an envelope, and have it delivered by regular mail. It is relatively reliable, but painfully slow compared to transmitting the data over telephone lines. Internet has transmission rates that normally reach as high as 45-50 megabytes/second in the trunk lines and could transmit, at that data rate, the book holdings of a large library in a matter of minutes using telephones lines. The device which is used to interface the digital computer with the analog signal in the telephone lines is the modem. The technology is very reliable and very fast. Error correcting protocols with names like Xmodem and Ymodem are used to continually monitor whether the signal at the receiver has the same properties as the signal at the transmitter, thereby insuring the reliability of the transmission.

Opening and setting up new classrooms on the bulletin board can be performed in a matter of minutes. The capacity of the bulletin board is virtually unlimited. The bulletin board software that CNU is currently using is capable of running 60,000 conferences on 1000 lines. In a system of networked microcomputers, there would be no reduction in performance to increase the number of classes held on the bulletin board by hundreds or even thousands.

Division of Labor

The project divides into five functions which define the roles of those directing the project. The director and two of the four team-leaders are requested as full-time positions by the second year of the biennium. The remaining two team-leaders are faculty and will require one half release time. The functions performed by the director and the team-leaders are as follows:

Director:

Integrating the activities of the team-leaders and initiating projects in the more problematic areas of distance learning such as course ware and communication software development.

Team-leaders:

- 1. Setting up hardware and the installation and maintenance of the bulletin board software. The position researches new technologies in communications hardware and communications software. It is the responsibility of this position to stay on top of the latest technology relevant to the *CNU On-Line* project including developments in educational software. This position reports to the Provost.
- 2. Supervising the procurement of digital text and the conversion of printed text to a digital format through the use of scanners, the obtaining of permissions from publishers, and the downloading of texts from commercial bulletin board services and networks such as Internet. This position reviews and obtains educational software

and is responsible for obtaining support for instructors that are involved in authoring their own course ware. It is likely that the position and function would be transferred to the library in the second year of the second biennium.

- 3. Recruiting and supervising faculty who have release time to develop the material for the bulletin board format. The position researches pedagogical theories relevant to distance learning. The position would be responsible for developing assessment instruments that would evaluate the quality of distance learning courses. The position supervises the development of tracks within departments which offer the full baccalaureate degree through distance learning. Each faculty member so recruited will also become a source of impetus on the further spread of the new instructional dynamic.
- 4. Serving as liaison to student and administrative services and integrating these services with *CNU On-Line*. It is the responsibility of the position to explore the possibility of team teaching distance learning courses nationally and internationally and providing material for the dissemination of *CNU On-Line* to other institutions. The position would not begin until the second year of the first biennium.

The instructors who are developing their courses for CNU On-Line, receive one half release time for developing heavily enrolled general distribution courses and one quarter release time for all other courses for the first semester that they are using the bulletin board. The project requires one full-time secretary that would serve the director and team-leaders and would supervise the work of the student assistants. The functions performed by the team-leaders necessarily overlap and two of the positions will likely be absorbed by other agencies of the university by the second or third biennium. Because of the explosive pace of technology, it is not reasonable to expect that a plan will have operational value beyond a four year period. The CNU On-Line project is designed to be an ongoing adaptive process that will systematically evaluate itself and revise its structure and functions as circumstances warrant. Although the use of educational software is desirable such as computerized tests, simulations, hypertext and multimedia, CNU On-Line emphasizes computer managed communications as the primary medium of instruction. Academic projects for developing educational software have been often unsuccessful. Most of the good software that is available for instruction has been produced by entrepreneurs working independently of university projects. Nevertheless, CNU On-Line will provide support for the development of instructional course ware that specifically integrates into a computer managed communication environment.

Timetable

The goal is to bring at least five courses on-line for each semester of the 1994-96 biennium and to have, by the end of biennium, enough options that a student could complete all the core requirements as distance learning courses. Specific degree concentrations would be targeted for development such as specialization in government administration. Such a focus would be based on the type of student that would likely take the degree and the preparedness of the department to offer its courses as distance learning courses. Evaluations would be made of the courses at the middle and at the end of each semester. Standardized evaluation forms would be constructed for these purposes and questionnaires would be asked on the bulletin board

itself. All answers would be collected as text files for statistical analysis. At the end of the 1994-96 biennium offering release time for the development of distance learning courses would end. From that date on, granting release time for course development would be a matter between the Dean and the academic department and would not directly involve this CNU On-Line initiative. In preparation for the 1996-98 biennium, an evaluation and review will be made of the accomplishments and problems of the first two years. The goal of the second biennium would be the continuation of supporting efforts to convert classroom courses to distance learning courses and to integrate the administrative and student services, so that CNU would become, by the end of the decade, a state of the art, distance learning institution capable of offering degree programs in both a traditional and distance learning format. At the end of the second biennium, the temporary part-time restricted faculty positions which served the transition to the distance learning format would be dissolved and a restructuring of the administration of CNU On-Line would occur. It is likely that most of the functions that the four directors performed would be absorbed and distributed throughout the university once CNU On-Line is fully operational. By the beginning of the twenty-first century, CNU will be prepared to take advantage of the full range of information technologies that will result from the use of high bandwidth fiber-optics technology in telecommunications.

History of Distance Learning at CNU

The Department of Philosophy and Religious Studies began using computer technology in the Fall of 1988 by providing students, enrolled in the general distribution sequence, History of Philosophy 201G-202G, with reading selections on computer disks together with a small word processor for writing essay assignments. In the Spring semester of 1989 a program had been developed by a member of the Department of the Philosophy and Religious Studies that allowed the students to take interactive tests on the same disk that contained the reading selections. By the Fall of 1990 the program had been developed to the point that the reading selections were accompanied by hypertext software which could provide commentaries on user selected passages. Since the course ware was judged to perform many of the functions of the traditional classroom, the classroom portion was dropped and replaced by periodic one-on-one tutorial sessions with the instructor. In the Spring of 1991, the tutorial sessions were replaced with an electronic bulletin board using share ware bulletin board software on an IBM 8088, and one telephone line. At that time the only facilities for contacting the bulletin board on campus were two computers in the IBM lab at the Information Technology Center. The electronic bulletin board proved to be a powerful pedagogical technology that not only was interactive, writing intensive, and an ideal platform for cooperative learning, but from an institutional point of view was an extraordinarily inexpensive means of delivering quality instruction. By the summer of 1992 the bulletin board was being run on a 486/33 machine using PCBOARD software and two telephone lines. During the summer semester an upper division course in Philosophy was team-taught with an instructor from Mercy College, New York. Also, that summer, an independent study course in Symbolic Logic, using logic course ware, was accessed through the bulletin board. In the fall of 1992 the Bulletin Board had been expanded to five telephone lines. Two upper level Philosophy courses in conjunction with a classroom, and one lower division Philosophy course without a classroom, was being taught using the system. The Department of Philosophy and Religious Studies opened a computer lab with three telephone lines for contacting the During the 1993 Spring and Summer semesters two members of the bulletin board.

Department of Philosophy and Religious Studies and two members of the Department of Government and Public Administration were using the Bulletin Board for teaching all or part of their courses. A Medical Ethics Forum was begun in order to open communication between medical health professionals and members of the Department of Philosophy and Religious who were teaching courses in Medical Ethics. The number of telephone lines was increased to 7 to accommodate approximately 325 students. During the Fall of 1993, the bulletin board will be used by at least six professors providing distance learning to approximately 400 students. An adjunct professor will be teaching one section of the History of Philosophy from Boston, Massachusetts, using a variety of instructional software for processing and analyzing student assignments that will be uploaded to the bulletin board. The Department of Government and Public Administration opened an additional computer lab with three computers and modems for contacting the bulletin board. During the fall semester 1993, the Department of Government and Public Administration plans to utilize one classroom for four different sections of the same course, all scheduled in the same three hour time block. This will have the effect of quadrupling available classroom space. The single classroom in which all four sections will be scheduled will be used for testing and for periodic meeting of the classes.

Appropriateness of Distance Learning at CNU

Distance Learning is not a value neutral technology. Its use at CNU has grown out of theoretical considerations in areas such as semiotics, cybernetics, linguistics, Critical Thinking, Post-modernism, and Critical Theory. Its development at CNU is rooted in the University's course offerings, curriculum structure, and in the research interests and the professional development of its faculty.

The emphasis at CNU upon Global course content has forced Departments like Philosophy and Religious Studies to explore novel approaches to teaching non-Western literary and intellectual traditions that are alien to Western textual categories and genres. Such a context has fostered the growth of instructional paradigms at CNU which are open to the challenges which distance learning makes of traditional conceptions of student writing and of the role of the student in the learning process.

Student demographics make CNU an ideal institution to develop Distance Learning. On the Student Opinion Survey of the American College Testing Association given at CNU in 1986-887, 69% of the students reported that they worked, and 75% of those that worked had full-time jobs. The survey was administered to all graduating seniors for the years 1986-87 and to 500 randomly selected non-graduating students. One of the three items which was said to be the cause of the greatest dissatisfaction for the CNU student was, "Availability of courses when needed." Forty percent of the students said that they were dissatisfied with the scheduling of classes. For many, regularly scheduled classes increases the number of semesters necessary for taking the required courses, or worse, prevents the student from obtaining the degree.

Distance learning is consistent with the mission of the University. Among the list of goals outlined in Resolution 11, of the Christopher Newport University Master Plan, approved by the Board of Visitors on July 13, 1989, is the statement that,

"Alternate times and days for selected existing programs and courses should be explored, i.e. weekend college, early morning classes, telecommunication delivery, so as to make the College a living-learning environment every day, all day long, each day of the week."

One of the areas that was identified in Resolution 11 was the

"need for attention to the upgrade and integration of computer and telecommunications capacities serving faculty and students."

One of the best environments for the integration of computers, telecommunications and innovative pedagogy is distance learning courses using the electronic bulletin board.

Code and Language Implications

This addendum request does not require changes to the <u>Code of Virginia</u> nor to the Appropriation Act.

ANNEX EIGHT

SEVAnet

Excerpts from Amendment Number 500 - 1995 Session

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CHRISTOPHER NEWPORT UNIVERSITY (242)

AMENDMENT REQUEST JUSTIFICATION

SEVAnet Amendment Number 500

Proposed Services

Christopher Newport University requests funds to support the development of a regional electronic communications network for the Southeastern Region of Virginia. The Southeastern Virginia Regional Network (SEVAnet) is a vehicle for providing telecommunications services to all of the communities of Southeastern Virginia.

The mission of SEVAnet is to use communications technologies to improve the quality of life and economic development in the Southeastern Virginia Region. This will be accomplished by developing and applying telecommunications models that: (1) assist local, regional, and state economic and community development programs; (2) provide easy-to-use assistance programs for businesses, including technology transfer programs; (3) provide citizens with swift access to comprehensive information concerning all educational assets in the region, including descriptions of all K-12 and higher education programs (including on-line courses); (4) provide specialized electronic forums for exchange of meaningful information, ideas, and data bases; (5) "showcase" the region's attractions, including musical, theatrical, recreational, theme park, library and museum assets; (6) promotes telecommunications literacy within the region.

SEVAnet will provide access to the Internet system, and, as a consequence, it will provide a window through which Internet users from around the world can view Virginia's Southeastern Region.

The focus of *SEVAnet* is on developing communications models that can be applied to regional development programs. When developed, these models will be made available to other networks in the Commonwealth. *SEVAnet* is ideally suited to play a leadership role in this effort because the 'partnership' approach to develop the *SEVAnet* project consists of organizations that specialize in telecommunications research, economic development, technology transfer, business development and education. The *SEVAnet* Council (the policy-making body) consists of The Center for Innovative Technology, the Peninsula Advanced Technology Center, Christopher Newport University, NASA Langley Research Center; The Virginia Aerospace Business Roundtable, and The Hampton Roads Planning District Commission staff. Other organizations are being approached.

The SEVAnet system is being constructed to include all of the jurisdictions within The Hampton Roads Planning District (Planning District # 23). Within this region, the clients of SEVAnet services have been identified as (in addition to the general citizenry) the fifteen local general purpose governments, special district governments, state and federal government agencies in the

region; the fourteen public school divisions, all community colleges, senior colleges and universities, the business community, the travel industry, and cultural and civic groups. The client base is broad because regional networks ignore boundaries, and they are based on inclusiveness.

Statement of Need

SEVAnet will provide a specific set of services to the business, governmental, educational, and civic communities of the Southeastern Virginia Region. Emphasis will be placed on the development of models. These services include:

Services Provided to the Business Community:

- Electronic communications among businesses (security provided)
- Access to Internet
- Partnership with NASA Langley Research Center to provide technology transfer programs
- Communications assistance programs for small businesses
- One-stop business assistance center, through The Peninsula Advanced Technology Center
- Electronic communications training programs
- Development of communications programs through professional business associations in the region
- Development of communications programs with Chambers of Commerce
- Development of models for business assistance
- On-line newspaper, including advertising programs

Services Provided to the Educational Community

- E-mail services to school divisions, community colleges, senior colleges and universities
- On-line courses offered though CNU On-Line
- Citizen access to all educational opportunities in the region, including course offerings, application procedures, general information, announcements of special events, etc.
- Communications for research teams, task forces, etc., on local, regional, national, international scales.

Services Provided to the Governmental Community

- Listings of all local, regional, state and federal governmental agencies in the region for citizen use
- Assist local and regional economic development programs through on-line descriptions (with video and sound capability) of development assets of each local government, as well as for the region as a whole
- Public information listings to include all public services (Examples include bus

routes, public meeting schedules, public utilities calendars, hospitals, public safety, emergency preparedness, etc.)

Public sector job listings

Data files made available from around the globe (census data, etc.)

Access to special data, such as from the Small Business Administration, NASA Langley technological research and development, etc.

Descriptions of tourist attractions, special events

Services Provided to the Civic and Cultural Communities

- Descriptions of theatrical and music programs
- Listing of calendar of cultural events
- Listing and description of tourist attractions
- Listing of sporting and recreational programs/events
- Forums for the public discussion of issues and ideas
- Electronic access to libraries, museums

There are three important, if not critical, reasons that this project should be initiated during the current biennium and not deferred until 1996-98:

Competition: Hundreds of communities and regions are developing telecommunications networks. It is important that SEVAnet be constructed over the next year so that Virginia's Southeastern region can remain competitive with these regions, as more of the nation's businesses, governments, and education systems embrace new telecommunications methods. As military and government downsizing takes effect, Southeastern Virginia must adopt new modes of economic development now to survive in a fiercely competitive marketplace.

Momentum SEVAnet is being developed using a "partnership" approach. With CNU serving as the "host organization", SEVAnet is being constructed with the cooperation of many organizations, including NASA Langley Research Center, The Center for Innovative Technology, The Hampton Roads Planning District, The Peninsula Advanced Technology Center, and The Virginia Aerospace Business Roundtable. With the enthusiastic support and encouragement of organizations of this calibre, the momentum of SEVAnet's development should not be delayed.

> SEVAnet is developing rapidly. SEVAnet is on-line and is a registered site on the Internet system. Funding is needed to acquire the basic equipment and office space and to begin the development of models for use within the region and within the Commonwealth. It is doubtful that the high level of joint momentum currently enjoyed by this project could be resurrected should funding not be forthcoming.

Linkages

Regional networks are being developed in the Richmond Area (CVAnet), Blacksburg (Blacksburg Electronic Village), and in Northern Virginia (CAPaccess). By linking with these networks, SEVAnet will assist the

Commonwealth in getting off to a good start in the emerging telecommunications arena. The SEVAnet project will prove to be of benefit to the citizens of the Commonwealth.

Anticipated Results

The mission of SEVAnet is focused in the area of economic and community development. The primary clients of SEVAnet are the 1.44 million citizens of the Southeastern Virginia Region. Secondary clients include public organizations, businesses, educational institutions, and civic and cultural organizations. There are fourteen local governments, several dozen regional agencies as well as numerous state and federal agencies in the region. There are fourteen school divisions in the region, each with several schools at the K-12 levels. There are three community colleges, one public college, two private colleges, one private university, and three public universities in the region. There are numerous theatrical, musical, tourist-related, and museum activities in the region. The promise of SEVAnet is to use a clean technology to promote a higher quality of life and economic development by helping to create more high quality jobs in the region

This request will be implemented as a pilot project as specified in the policies for amendment requests. It is designed to become self-supporting within one year of operation. It will focus on the construction of pilot programs for economic development, government, and education.

The primary objective of the project is to develop a regional electronic communications network to provide telecommunications services to all of the communities of Southeastern Virginia. Outcome performance measures have been identified for each of the project's target clients:

Economic Development

- Assist in Attracting New Industries and Jobs. The most important economic development objective is to assist existing public economic development efforts in creating jobs in Southeastern Virginia. SEVAnet will accomplish this by applying telecommunications technology to enhance existing development efforts. By providing each local jurisdiction, as well as each Industrial Development Authority the opportunity to "showcase" their development assets and resources to the outside world, SEVAnet will assist in attracting new industries to the region. Governments in other areas have already accomplished this activity.
- Build Existing Businesses Through Technology Transfer. SEVAnetwillprovide local businesses access to technologies developed at NASA Langley Research Center and at other sources. SEVAnet will accomplish this through a partnership effort with the NASA Langley Research Center, the Peninsula Advanced Technology Center, and with other organizations. The strategy is to create user-friendly programs for transferring new technologies from NASA Langley and other sources, to the business, government, and educational communities. A second strategy is to make this transfer program electronically available on a state-wide basis. This can be accomplished

with electronic linkages to other community networks being developed in the Commonwealth.

Services to the Business Community

• Develop telecommunications models for several different types and sizes of businesses. SEVAnet will make working telecommunications models available to the business community. This will be accomplished by contracting with several businesses to develop experimental telecommunications models.

Education

- Develop communications linkages between school divisions, and between community colleges, colleges, and universities within the region. This will be accomplished by providing a central communications board for use by educational organizations.
- Create an electronic information capability that will list and describe the educational programs of all the educational institutions in the region. This will be accomplished by building a system of electronically linked, but physically independent computers that contain the relevant information. These computers will be linked to the SEVAnet system.
- Increase the level of telecommunications literacy in the region. This will be accomplished by: (1) providing a system that encourages young students to communicate electronically; and (2) providing training for teachers and mentors in the use of telecommunications.
- **Provide on-line courses easily accessible to the public.** This will be accomplished by utilizing *CNU On-Line* and other programs as they become available.

Services to Governments

- Develop a model telecommunications program for local governments in the region. This will be accomplished by working closely with several local governments to set up individualized pilot programs that can then be used by other local governments. Training programs will be included. In addition, SEVAnet will develop a strong telecommunications model for the region as a whole, with a focus on providing communications among governments, providing data bases and other information related to the region as a community.
- **Develop information pages for general access by citizens.** SEVAnet will work closely with regional, state, and federal government agencies to develop information pages for general access by citizens. Training programs will be made available.

Services to Cultural and Civic Groups

- Provide a central forum for public discussion of issues and ideas. This will be
 accomplished by establishing a centralized "electronic post office", accessible to the
 public.
- Provide an information board for museums, tourist attractions, festival organizers, and others. This board will contain information on calendars of events, etc. This will be accomplished by: (a) linking to established boards; (b) SEVAnet staff soliciting and maintaining calendars, etc., from the travel industry agencies.

Performance measures for the program will be used at two levels: usage and outcome levels. Electronic odometers will be used to count all exchanges on *SEVAnet* nodes. This will provide a baseline of usage rates for each of the primary and secondary nodes. It is expected that usage rates will escalate rapidly after the first few months on-line. Attempts will be made to systematically measure the outcome of communications exchanges on each of the primary nodes. For example, the number of electronic inquiries that result from electronic presentations by a city government or industrial development authority can be counted, and follow-up can reveal whether or not a "hit" has been scored. If the effort is successful in attracting new industry, the number of jobs created can also be counted. Similar measures can be applied for all of the primary and secondary nodes, although it is recognized that some outcomes are more difficult than others to measure (such as increases in telecommunications literacy in the region).

This project is designed to be self-supporting after the first full year of operation. Extensive evaluation of the project will be accomplished at the end of FY96 to determine its effectiveness and its financial feasibility.

Funding Commitment

This request represents an on-going commitment of the University to actively promote regional economic development and to establish partnerships with regional governments, educational systems, and businesses. Operating costs will continue into future biennia, but the program will be self-supporting after the first full year of operation. The general fund revenue requested to support the program in the first year will be offset fully in the second year by revenues generated through membership fees, private gifts and endowment. Student tuition and fees will not support this program.

Consequences if Not Funded

If this request is not funded, the full development of *SEVAnet* will be delayed by as much as two years. Community networks are being developed by the hundreds throughout the United States, Canada, and Europe. These networks are extremely popular and they are becoming powerful economic and community development tools. If Southeastern Virginia is to be competitive, it needs to start now to develop its telecommunications infrastructure in conjunction with Bell Atlantic's commitment to developing a compatible

telecommunications infrastructure. Since the development period is lengthy, the consequences of not funding this project is to place the Southeastern Region at a competitive disadvantage in the future.

Code and Language Implications

This amendment request does not require changes to the *Code of Virginia* nor to the Appropriation Act.

Alternative Solutions

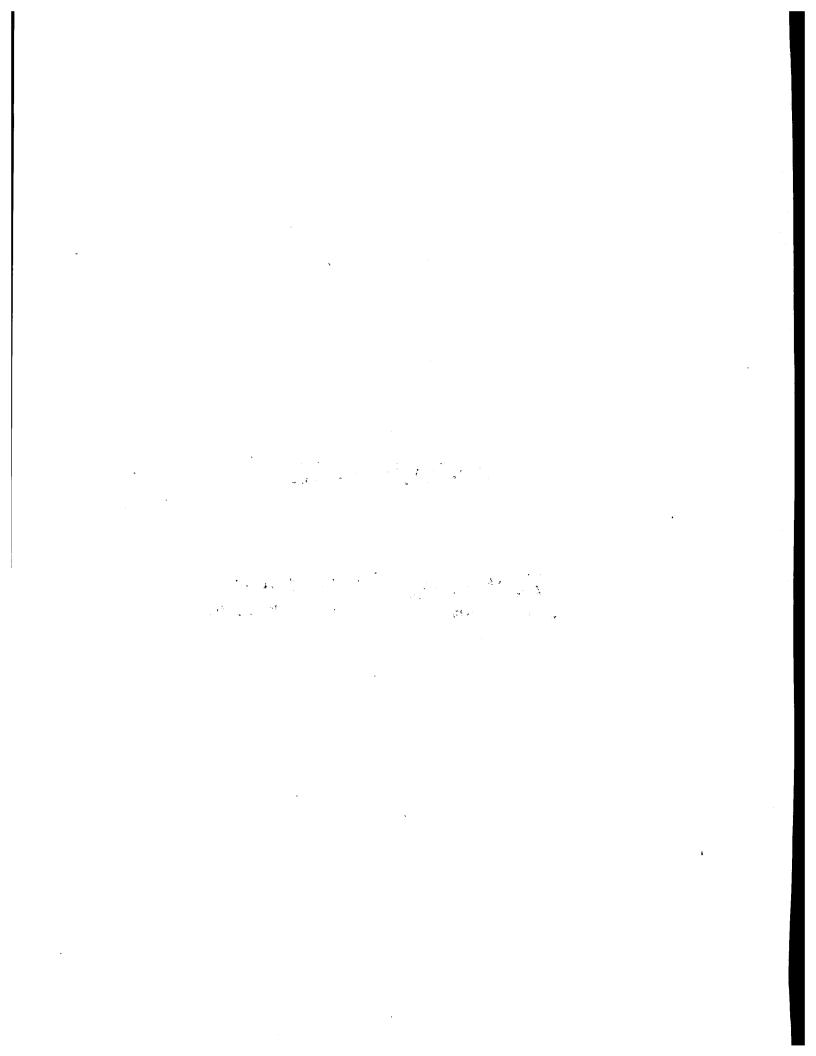
There is no alternative to mounting a full-scale effort to construct a regional telecommunications network for Southeastern Virginia. There are several private vendors of telecommunications services in the region who offer specific programs, but their specialized services are designed primarily for the private sector and none focus on regional development. The private vendors cannot offer the full range of communications services that can be provided by a public network that engages the governmental, educational, technological, business and civic communities.

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ANNEX NINE

Technology Integration

Excerpts from Amendment Number 501 - 1995 Session



CHRISTOPHER NEWPORT UNIVERSITY (242)

AMENDMENT REQUEST JUSTIFICATION

TECHNOLOGY INTEGRATION Amendment Number 501

Proposed Services

Christopher Newport University requests funds to establish a Multimedia Center in the Captain John Smith Library to increase faculty productivity, improve the use of technology in and encourage alternative modes of instruction through the development of multimedia instructional techniques. The Multimedia Center will facilitate faculty development and adoption of new integrated technologies which will integrate media software and library electronic bibliographic and full-text databases with computing software and technologies. It will allow faculty with released time and assistance to enhance and/or replace traditional classroom instruction in the new medium and will provide state-of-the-art workstations for students to complete their assignments and research projects. Curricula at CNU are undergoing change and interactive technologies will play major roles in: 1) student learning on a particular subject where one module or learning block will concentrate on electronic/media resources, 2). concentrated faculty/student interaction, 3) brief lecture/discussion periods, 4) technology skills development, 5) peer group activity, 6) hands-on experience or simulations. The Multimedia Center will consist of two parts. The first laboratory is a Faculty Development Laboratory, equipped with state-of-the-art workstations supplied with CD-ROM drives, scanners, video and slide capture programs, and sound capability. This laboratory will provide faculty with an introduction to a wide variety of multimedia authoring tools in a central location with support for high-end applications, such as color scanning, so that individual departments will not have to purchase expensive items. It will also provide service and support in a central location. Faculty will be able to receive assistance in the use of this equipment and programs from highly trained personnel who understand its use. While preparation of the material will be accomplished by the faculty, they will receive guidance in what programs are available and how the material should be designed to facilitate the learning process. Software packages will be purchased to develop new materials (Word Perfect Presentations, Astound, Adobe PhotoShop and Persuasion, among others) and to provide content (such as copyright cleared photographs, video and sound clips of historic events, and electronic textbooks) as well as off-the-shelf software developed by professors at other universities which could be adopted for CNU courses without major modifications. It will also allow faculty to develop materials suitable for presentation over CNU On-line, especially for laboratory-based classes, such as the basic sciences and foreign languages.

The second laboratory, an **Electronic Classroom**, will allow students to access this material in a networked environment, both in a classroom setting and for individual use. An electronic classroom is necessary to allow faculty to guide students in the use of new computer resources in a structured fashion. It will allow for short-term sessions (one week or less) per class to

accomplish specific multimedia tasks. The classroom will be open to all classes taught at CNU and will be scheduled by the Multimedia Center. This setting will allow faculty to control all student monitors during a lecture period and release control back to the students so they can reinforce the skills and instruction they have just received. Students will also be able to access programs their instructors have prepared; download class notes, assignments, and articles; and view supplemental materials. Students will be able to access the Internet to obtain additional materials from such sources as the upcoming Virginia Virtual Library Project, VLIN, the Library of Virginia's virtual library, and a variety of information sources the library has purchased for Internet access -- including the FirstSearch collection of bibliographic and full text databases and the Legi-Slate gopher service for political information. This is important, as a significant portion of the student body at Christopher Newport University does not have access to computers at home. This laboratory will serve as an introduction to computing beyond word processing and allow students to develop valuable state-of-the-art skills in technological and cognitive areas which will enhance their ability to obtain employment upon graduation. The laboratory will have extensive hours to allow both day and evening students to benefit from this facility. Student laboratory assistants will guide their peers in the use of this new technology.

Statement of Need

As the University continues its integration of technology into existing and alternative modes of instruction, it is critical that the University assume responsibility for effecting change by providing appropriate incentives and rewards to the faculty and students to encourage the transition. The Faculty Development Laboratory will provide the opportunity for experimentation, professional growth, and peer support. The faculty will be encouraged through a competitive application process to demonstrate their use of technology in the classroom or on-line instruction and their models will be used and replicated by other faculty. The student Electronic Classroom will provide an opportunity for the students to develop skills in the use of technology at the individual level and in a classroom setting as well.

The Multimedia Center coordinator will develop presentations for a general introduction to the Faculty Development Laboratory, training for specific equipment and programs that faculty might use to develop their multimedia presentations, and in-depth individual and group instruction on specific programs that faculty have decided to use to create their multimedia presentations. These activities will be given on an ongoing basis. While faculty released time support will be provided, the laboratory will be open for use by all faculty members.

General presentations will also be made each semester for the Electronic Classroom. This will introduce students to the classroom, its equipment and software programs. Student employees will be available in the classroom, which will be open extensive hours to support both day and evening students. Student assistants under the supervision of the Multimedia coordinator will provide one-on-one peer training for students who need assistance in learning this new mode of instruction.

The Faculty Development Laboratory will include two Macintosh workstations, two PC workstations, five Unix and RISC based workstations (such as DEC ALFA with OSF1 operating system, HP9000 with HPUX operating system, IBM RS/6000 with AIX operating

system, SGI Indigo2 with IRIS operating system, and Sun SPARC 20 with Solaris operating system). Each machine will have a CD-ROM drive, ability to capture slide and video material, sound capability, a high end display and a Bernoulli drive to store faculty work-in-progress on removable discs. The laboratory will contain high quality input and output devices. These general lab devices will include scanners, color plotters, color printers and high-end printers, pointing and digitizing equipment, speakers and headphones. The software for the Multimedia Center will include presentation software, commercially available courseware packages, and CD-ROM materials to provide content for presentations.

The student electronic classroom will include five Macintosh workstations and twenty PC workstations networked to the instructor's workstation, a file server, an LCD panel, overhead projector, screen, and a high end printer.

Anticipated Results

This request will be implemented as a pilot project as specified in the policies for amendment requests. This represents a new approach for faculty and student development at the University to encourage the use and integration of instructional technology.

The objective of the program is to increase faculty productivity, improve the use of technology in instruction, and encourage alternative modes of instruction through the development of multimedia instructional techniques.

The outcome performance measures for the program include:

- Increase in number of faculty participating in faculty development efforts
- Increase in number of faculty using technology in instruction
- Increase in number of faculty using alternative modes of instruction
- Increase in levels of student enrollments in courses using multimedia instruction
- Increase in students' basic technology skills

Assessment criteria will be a major component in the selection of projects for release time. The Director of Assessment and Evaluation will add components for technological assessment in the University's assessment instruments.

The first four measures will be evaluated at the completion of each academic semester and an annual report on progress will be accomplished at the conclusion of FY96. However, useful results related to increases in the use of the technology and increases in levels of student enrollments are not anticipated until FY97 since one must allow for the obvious progression of the "development" phase into the "implementation" phase of technology in the classroom. The last measure will be incorporated into the University's student assessment process and results will be included in the student assessment reports that are submitted to SCHEV each year beginning in FY96.

Funding Commitment

This request represents an ongoing commitment of the University based on the outcome measures of the project. First year costs are greater due to the initial one-time purchase of equipment. Personnel costs and hardware/software upgrades will continue into future biennia.

Consequences if Not Funded

The University is engaged in a variety of restructuring initiatives that focus on the use of technology in instruction and alternative modes of instruction. Historically at CNU, modest resources have supported "traditional" faculty development efforts such as workshops, sabbaticals, and discipline-related research efforts. To make substantial changes in the use of technology in the instructional arena, the University must direct its attention to faculty development efforts and improve the resources and support services that encourage faculty experimentation and technology transfer. The multimedia center is an important component of the new faculty development focus. If the amendment is not funded, the University will continue its effort in this area, but progress will be slow and the integration of technology into the curriculum will not be timely.

Code and Language Implications

This amendment request does not requires changes to the Code of Virginia nor to the Appropriation Act.

Alternative Solutions

The equipment supporting this request can be funded through two alternative approaches. Acquisition of most of the equipment can be accommodated through the Higher Education Equipment Trust Fund Program if sufficient funds are allocated to the University to support the project. However, the software does not meet eligibility requirements under the current HEETF program.

A second alternative for the purchase of the equipment is the Master Leasing Program supported by the Department of Treasury. The program allows the University to finance the equipment over a three-year period. This approach reduces the annual operating costs of the pilot project, but extends it to a three year commitment.