Appendix A

Committee Memberships

A. Middle States Self-Study Executive Committee

Nelson G. Markley, Co-Chair
Don C. Piper, Co-Chair
Daniel Fallon, Co-Chair (to 7/96)
Marvin A. Breslow, Secretary
Drury G. Bagwell
Nicholas S. Chant
Bonnie Thornton Dill
Deborah Goodings (to 8/96)
Curtis M. Grimm

Phylis B. Moser-Veillon
Jennifer B. Presley
Lemma Senbet (to 12/95)
Support:
Eugene R. Schnell
The Office of Academic Affairs

B. Middle State Self-Study Steering Committee

The Executive Committee
Chairs of the Task Forces
Javaune Adams-Gaston
John D. Anderson
Judith Bair
Martha Best
Frank Brewer
Roberta Coates
Jennifer Fajman
Nariman Farvardin

Irwin L. Goldstein
Willis D. Hawley
Julia Keener
Paul H. Mazzocchi
David Meier
Gary Pavela
Ann Prentice
Richard N. Price
Lawrence W. Sherman

C. Task Force on Achieving Excellence in Undergraduate Education

Claire Moses, Chair
Shirley Logan
Katherine McAdams
Thomas Regan
Scott Wolpert

Support:
Nehama Babin
Robin Bernstein
Danuta Nitecki

D. Task Force on Achieving Excellence in Graduate Education

Jerald Hage, Chair
Gay Gullickson
Alice Mignerey
Tim Ng
Nancy Struna
Jim Wallace

Support:
Nehama Babin
James Greenberg
Catherine Mobley
E. Task Force on Promoting Interdisciplinary Programs and Research Activities

Patsy Brannon, Chair
David Barbe
Michael Coplan
Robert Friedel
Susan Lanser
Donald Pope-Davis

Support:
Ed Engelbride
Laura Stapleton

F. Task Force on Research for Education and Service in the 21st Century

Alex Dragt, Chair
Ira Berlin
William Destler
Martin Gannon
Sandra Greer
Marie Howland
David Lightfoot

Support:
Mahlon Straszheim
Laura Wilson
Janet Schmidt
Catherine Welch

G. Task Force on Faculty and Staff in the 21st Century: Responding to New Opportunities and New Challenges

Marilyn Berman, Chair
Susan Frazier
James F. Harris
Susan Komives
Jo Paoletti
Sylvia Stewart

Support:
George Dieter
Sanjeev Gandhi
Janet Schmidt
Appendix B

Major Findings and Recommendations of the 1985-86 Self-Study

and

Summary of Subsequent Accomplishments

The 1985-86 University of Maryland at College Park Self-Study contained a number of major findings and recommendations. These are listed below, along with the actions the University has taken to deal with them. This listing is meant as a brief check-list. More detailed discussions of many of the actions are contained within the body of the current self-study, so the description of those actions are particularly brief.

The University Studies Program needs to be made more coherent in order to achieve its intended general education purposes. We recommend a new curriculum accompanied by new staffing, financing, and management arrangements.

The Pease Committee made a thorough study of the general education program and recommended major changes to the curriculum and its support. These changes have been adopted as the CORE program.

New initiatives are needed in undergraduate instruction. We describe a possible operational structure for an Honors College and consider measures to encourage greater study of foreign languages and cultures.

The Markley Committee recommended significant changes in the University Honors Program, which have been adopted; the Honors Program has since moved into Anne Arundel Hall. The CORE program requires that every student take a "Human Cultural Diversity" course, which exposes the students to attitudes and cultures different from their own. Other initiatives include College Park Scholars, Gemstone, and the Language House.

The review of undergraduate instruction reveals a need for more self-reflection about teaching techniques. We suggest measures to stimulate reforms.

The Pease Committee suggested a number of major reforms in teaching, which have been adopted.

Mainframe capacity has evolved from inadequate to satisfactory. The emphasis should now be placed on a distributed network of workstations, greater systems compatibility, and closer overall coordination.

The University has installed a network connecting virtually every room on campus and in the dormitories, offering widespread computer laboratories, and providing universal access.
The library system requires far greater funding and closer coordination with academic planning. We recommend ways to improve facilities and management.

The Strategic Plan recognizes the special needs of the libraries, including the need for increases in funding. A new Dean of Libraries has been appointed and charged to develop a plan to address long-standing deficiencies.

The campus survey shows wide areas of satisfaction but a few problem areas—parking policies, "the bureaucracy", and a need for collegiality and shared activities. We recommend a variety of measures to help create the "user-friendly" campus: new communications media, greater recognition for individual achievement, improvements in the ambiance of public spaces and more assistance to newcomers to campus.

In 1989, the President created a "Service Without Turnaway" committee to devise means for the campus to improve its service to internal and external customers. This committee's recommendations have evolved into a comprehensive Continuous Quality Improvement (CQI) initiative, which includes ongoing customer service training for campus units and process improvement efforts to make the University procedures more responsive. The campus is also engaged in a multi-year process to redesign key business processes using information technology. In 1993 the President formally organized an Office for CQI and a CQI Council. The Office provides internal consulting for departments attempting to improve their services and instruction. Many academic units have engaged the Office to help make their departments less bureaucratic and more participative in their planning and decision-making. The CQI Council regularly reviews data on student, faculty and staff satisfaction and has sponsored nine cross-functional teams to address problem areas. The most recent of these teams is a standing working group that will focus on improving the Quality of Worklife for all University faculty and staff. Additionally, the University spent $3.1 million dollars performing major renovations on the public spaces McKeldin mall, Hornbake mall, Morrill quadrangle, and Tawes quadrangle to provide a more attractive and useful campus. A Visitor Center was created in Turner Hall to assist newcomers.

Some adjustments are needed in the current relationships between the campus and Central Administration and with State agencies and offices. We recommend changes in current oversight arrangements.

The Higher Education Act of 1988 reorganized higher education in Maryland, providing greater autonomy to the University of Maryland at College Park and significantly altering the relationship of the University to the University of Maryland System and to the State.

While the Campus Senate has dealt effectively with some campus issues, it needs to become a more vital forum and a more effective deliberative body. We suggest several changes in its size, schedule, and operations.
The Campus Senate revised its Plan of Organization and By-Laws to address these issues. Revisions included changes in schedule to allow new committees to function over the summer, creation of the position of chair-elect to provide better continuity, simplification of the committee reporting system, creation of the Committee on Governmental Affairs for better liaison with the State, introduction of "councils" that allow joint Senate-administration oversight of key University operations, redefinition of staff member categories for consistency with State definitions, and some reapportionment.

The data indicate unsatisfactory levels of State financial support over the last decade. We recommend a careful analysis of our economic situation and several initiatives to expand private as well as State funding.

In response to the Reorganization Act of 1988, the University developed an enhancement plan, which was partially funded the following year. In subsequent years, the State's financial situation has precluded the kind of funding envisioned in the plan. Private fund-raising has increased significantly, doubling over the past three years. Corporate and foundations support for the University increased 47 percent over the past year.

There is fairly widespread criticism of many campus administrative support services. We offer an analysis of contributing causes, and some corrective measures.

The University performed self studies and formal assessments of the performance of the Departments of Personnel Services, Procurement and Supply, Motor Transportation Service, Police, and Environmental Safety. The process led to better focus for each department, to a permanent client-based advisory committee for Personnel Services, and to new leadership and a policy oversight committee for Environmental Safety. Significant improvement has occurred in the performance of administrative units, as indicated by perception surveys. Virtually every administrative department maintains either formal or informal relationships with its principle customers.

The suggested replacement of the financial accounting system is now being undertaken in a massive way. The University of Maryland System has launched a 15-million-dollar project to replace all of its business-application systems. The University is simultaneously creating redesigned business processes through which the new systems will be deployed in a client-server mode. This activity is being guided by teams that combine administrative, academic, and student divisions offices and users of administrative services.

Additionally, more powerful mainframe computers have enabled the development of an excellent student-information system that addresses the major concerns of the academic users. This has allowed the development of a highly sophisticated telephone voice response system that allows students to register for courses, change their schedule, and use an interactive wait-list for closed courses. In addition, it provides many other services that can be accessed from home, on campus, or at
a number of kiosk units across campus. These services include allowing students to check grades, parking information, student accounts, and status of financial aid checks; to pay bills, apply for permits, apply for graduation, and respond to surveys.

Other significant improvements of student services include free official transcripts, available immediately for in-person requests or in one day by FAX; free diploma applications and improved diploma delivery time; a comprehensive Transfer Credit Center that evaluates all incoming transfer student course equivalencies; an on-line system that allows students to review their records and degree requirements; same day enrollment verification processing; an electronic grade submission option for faculty; and electronic permission stamps for advisors and professors to lift registration restrictions. The University is also a national leader in World Wide Web services: Significant progress has been made in developing Internet services, which include planning course schedules, reviewing course offerings and seat availability, requesting official transcripts, off-campus housing searches, financial aid information, and Career Center services. Students can also apply for admission via the web.

Many campus buildings show the wear and tear of heavy use, inadequate maintenance funding, and poor design. We offer an analysis of the factors that have led to the current problems in physical facilities renovation and replacement. We call for new techniques in budgeting, funding, design, and construction that could lessen the negative impact of State restrictions and help to produce superior facilities.

The major changes since 1985 affecting planning and construction of University facilities include the creation of a department (in 1985) to perform and administer the University's facility programming, design, and construction program; delegation (in 1988) followed by legislation (in 1993) of construction autonomy from the State to the University (it was previously required to go through the State's General Services); the successful planning, design, and construction of over 20 significant capital projects (each of cost greater than two million dollars) with a total project value of over 230 million dollars; and the use of progressive management techniques, such as design/build, Construction Management, and partnering, to rapidly implement the extensive planning and construction program described above. Although the University does not have full authority to appoint architects, it does have sufficient votes on the State's selection board to determine the outcome. An advisory campus Architectural Review Committee has recently been established. The State now readily accepts University design concepts.

The University has funded over 72.6 million dollars in facilities renewal projects during the 11 year, FY 86 - FY 96 period. While most of these projects involved renovation and repair of building systems such as roofs, heating and cooling systems, and electromechanical system repairs, a few major building renovation projects were funded. Most notable of these was the Skinner Building
renovation and renovations in J. M. Patterson, Turner Laboratory, the Dance Building, the Benjamin Building, and the installation of fume hoods in Chemistry. Also of note was the continual improvement of our classroom facilities accomplished by providing $500,000 per year in funding throughout the period.

Campus research support services have not kept pace with the rapid increase in externally funded research. We explore areas where improvements are needed and call for specific changes to enhance the ability of faculty researchers to identify, obtain, and administer external research funding.

The Office of Research Administration and Advancement (ORAA) has been reorganized and expanded, particularly in the areas of grants development and electronic resources, to enhance the ability of faculty researchers to identify, obtain, and administer external research funding. New information technology resources include a World Wide Web page to direct researchers to information on funding sources, deadlines, and proposal preparation information; a database that includes an electronic notification system to provide researchers with access to grant funds the day they are authorized in ORAA's accounting system; and a faculty profile database that can be used to notify potential grantors of research expertise. Grant administrators are now assigned to specific Colleges/Schools, and ORAA is currently working with the Graduate Council Committee on Research to improve and expedite the internal routing process for grant proposals. In addition, the University Research Corporation International was created as an affiliate to UMCP in order to enhance the University's ability to conduct funded research activities in the international arena.

While the service mission figures prominently in the campus' statement of basic policy, in practice it is often regarded as of little importance. Attention should be given to the ambivalent attitudes among faculty toward service, and to the weight given by the administration to individual service contributions.

The recognition of the service mission has increased significantly with the re-unification of the Maryland Cooperative Extension Service with the University; explicit recognition of service in the faculty Appointment, Promotion, and Tenure policy; and a major initiative in the Strategic Plan.
Appendix C

The Educational Mission of a Public Research University:

A Self-Study Plan for the University of Maryland at College Park

November 3, 1995

Since the last Middle States periodic review report five years ago, the University of Maryland at College Park has successfully survived a fiscal crisis, dramatically improved the quality and increased the diversity of the undergraduate student body, and built or renovated important buildings in the service of academic programs.

Though we also acknowledge some losses and setbacks during these years, evidence of success is everywhere. The University has been hurt by its inability to retain some outstanding faculty and staff, several of whom left or retired early because of a lack of salary increases, but distinguished senior appointments and some exciting junior appointments have helped to offset the faculty losses. Although the Supreme Court decision on the Banneker undergraduate scholarships poses a challenge to our African-American recruitment efforts, evidence of diversity in faculty, staff, and students is everywhere. The academic credentials of the entering first year students and the graduation rates of seniors have reached all-time highs. The expansion of the Honors Program and the creation of the College Park Scholars (CPS) program are major efforts to attract and to retain excellent undergraduates. Finally, we have added some new buildings and renovated others to provide up-to-date facilities for academic programs. The Van Munching Building, which houses the College of Business and Management and the School of Public Affairs, the new plant sciences building, and the computer science building are major additions. The selection of plans for the new performing arts center is tangible evidence of continued confidence in the future of the University of Maryland at College Park (UMCP) as well as support for our mission to promote the performing arts through our academic programs and to enrich the surrounding community.

Five years ago the University quickly learned that planning and self-examination were not academic exercises but were confrontations with reality. Because of a State of Maryland fiscal crisis, UMCP faced a rolling series of budget cuts that amounted to a loss of $45 million and 183 lines. UMCP faced this emergency with procedures designed to make "Hard Choices" that engaged all elements of the University and maintained, and even modestly enhanced, quality programs. Although there had to be some losses, there also was clear gain in what UMCP learned about planning and consultation.

The fiscal crisis demonstrated the vitality of our community and its ability to respond effectively to crisis, but it also gave impetus to more and better planning procedures. The University reconfirmed the value of wide faculty participation in determining academic policy, and the Academic Planning and Advising Committee (APAC) has assumed important new responsibilities. Continuous Quality Improvement was introduced, and the campus now has a President's Council to implement improved responsiveness to the University's clients. Specific areas such
as retention, diversity, and continuing education have been studied and are the subject of thoughtful new plans. Finally, the initiation of Strategic Planning on a campus-wide basis offers the most comprehensive procedures for flexible planning for the future of UMCP.

The achievement and acceptance of these plans has greatly benefitted from the development of shared governance at UMCP. At every stage of the "Hard Choices" emergency, the President and the Provost engaged the University--mainly the faculty--in the deliberations and the decisions. Such engagement has become an integral part of the University organization and of the very culture of UMCP. Established institutions, such as the Campus Senate, have accepted enlarged responsibilities, and new institutions, such as the Library Council, faculty ombudsman, and staff ombudsman, have expanded the range of faculty and staff participation.

The recruitment of better students and excellent faculty, the initiation of new programs, and the improvement of facilities demonstrate the vitality and creativity of UMCP. Even under difficult circumstances, UMCP has sought to fulfill its mandate to provide education, research, and service. It continues to seek ways in which to meet its unique mission in Maryland higher education, where it has been assigned the responsibility to offer superior education in an environment of research excellence.

"Offering superior education" is a fundamental value of the University and an on-going goal which has been at the heart of many of our initiatives, directly or indirectly, since the mid-1980's. After a decade of effort, it is entirely appropriate that we use the opportunity of this campus-wide self-study to examine thoroughly the progress, the problems, and the future of our education mission. For this study, education will be the central focus and the hub, through which we can examine the expectations and options available to faculty and students as they fulfill this mission, and to which we can relate the other missions that drive us, such as research and service.

1. Plan of Organization

The organizational structure of a self-study for an institution of higher education must encourage strong ties to the entire University community and must provide the capability to reach closure on a wide range of issues in a timely manner. These demands present a special challenge to a large public university. The University of Maryland at College Park has designed a multi-tiered structure to meet these twin challenges for its Middle States Reaccreditation Self-Study.

The main components of our organizational structure are an executive committee, a steering committee, task forces, and resource groups. They form the tiers of the larger plan. In this section we describe these key structural elements, their composition and responsibilities, and the way they fit together.

Executive Committee

The Executive Committee is the leadership team for the self-study and the primary decision-making body. Appointed by the Provost after consultation with selected leaders of the faculty, it has eleven members, seven faculty and four administrators. Its members all bring extensive university experience and provide balanced representation of broad university constituencies. The Co-chairs of the Executive Committee are a senior faculty leader and the Provost of the University. Its
Executive Secretary, also a faculty leader, will be the primary writer for the self-study report. Two other members of the Executive Committee from the administration are the Associate Provost for Planning and the Associate Vice President for Academic Affairs. Together they will ensure that the entire self-study has strong administrative support from the Office of Academic Affairs. The fourth administrator is an Assistant Vice President for Student Affairs.

The Executive Committee has been responsible for the design of the self-study and the preparation of this study plan. The Executive Committee has prepared charges, included in this document, to the five Task Forces and has also started identifying people to serve on these teams.

The Executive Committee will take responsibility for overseeing the activities of the Task Forces. When the Task Forces have completed their work, the Executive Committee will analyze their reports and specify the content of the final report. During the summer of 1996, it will assist in critiquing and editing the final report before the document is reviewed by the University as a whole. The final responsibility of the Executive Committee will be to organize and to host the visit by the evaluation team early in 1997.

Steering Committee

Although the Executive Committee is well suited for frank discussions and decision making, a self-study requires a broader basis of input and debate than is possible with one small group, however representative or carefully selected. The Steering Committee is explicitly designed to link the Executive Committee to University leaders and through them to the larger community. The Steering Committee's membership will include the members of the Executive Committee; the five Task Force leaders; several deans, department chairs and directors; the chair of the College Park Senate; the Presidents of the Student Government Association and of the Graduate Student Government; and the Chair of the Staff Caucus.

The Steering Committee will provide a forum for coordinating the work of the Task Forces. To meet this responsibility, the Steering Committee will meet more frequently as the Task Forces begin their work to help the Task Force leaders choose cooperative non-overlapping directions and to ensure that the self-study effort is consistent with the University Strategic Plan as it approaches completion. As the Task Force work proceeds, the Steering Committee will hear progress reports from the different groups, hold public hearings as needed, hear final oral reports from the Task Forces, and generally advise the Executive Committee.

Task Forces

The University of Maryland at College Park has successfully used Continuous Quality Improvement techniques to attack management problems such as computer access, large classes, and retention. A modification of this process has been explicitly designed for the Task Forces in this self-study. This process will be fully described in Section 3, but two points should be made here about this process in connection with the overall organizational structure.

First, the Task Forces will be small, eight to ten members. They cannot be broadly representative of the University, but the totality of people serving on Task Forces will be carefully selected to provide broad participation in the self-study. The
five Task Forces will bring an additional 40 to 50 people from all over the University into the self-study process. Second, each Task Force will work closely with resource groups.

Resource Groups

Each Task Force will be required to identify a large resource group of stakeholders, experts, and interested parties. Each Task Force will consult members of its resource group multiple times during its work. These resource groups, which will include a total of two-to-three hundred people, form the bottom and broadest tier of our study plan. Finally and most importantly, the overall organizational structure described in this section ensures that this tier of resource groups will have an important voice in the final report.

2. Task Forces and Charges

The Middle States self-study provides the ideal opportunity for the University community to concentrate attention on the enhancement of the educational mission and to do so in a broad context as set forth in the five Task Forces that we propose to establish: 1. Achieving Excellence in Undergraduate Education; 2. Achieving Excellence in Graduate Education; 3. Promoting Interdisciplinary Programs and Research Activities; 4. Promoting Research for Education and Service in the 21st Century; 5. Maintaining Quality Faculty and Staff in the 21st Century. Each topic will be assigned to a Task Force.

Over the summer, the Executive Committee held several discussions to identify the major goals for the self-study. A consensus developed early among the members of the Committee that enhancing the educational mission of the University should be the primary focus. This emphasis on the educational mission will enable the University to reaffirm to itself and to the public the diversity of its educational mission and its commitment to excellence in graduate and undergraduate education in an environment of research excellence and service. The Committee recognizes that other subjects such as facilities, administration, governance, climate, diversity, and quality of life are important issues in the totality of the University's mission and activities; but many, if not most, of these have been addressed recently in special reports and studies. The questions that the Executive Committee has identified for examination were shaped in part in response to current concerns expressed by faculty, staff, administrators, and students. These questions also are consistent with and supportive of the effort to develop a strategic plan for the University. The following questions will be guidelines for the Task Forces, which are encouraged to modify these directives as their work develops.

Achieving Excellence in Undergraduate Education

As a major research institution, the University must serve the most academically-talented students in the State and the nation. In doing so, we must offer educational programs that fully utilize the University's research activities and provide opportunities that are unavailable at other institutions. Our curricula must be attractive and challenging to bright and dedicated students. For some students, the undergraduate experience at College Park will be the foundation for entry into a career; for others, study at College Park will be the foundation for subsequent post-graduate work. In
either case, the University should make full use of all available educational and research resources to offer high-quality educational opportunities for undergraduate students.

The primary academic components of the undergraduate educational experience at College Park are the CORE program, which is applicable to all students, and the courses and supporting area activities that constitute the major. It is important that we achieve the highest levels of excellence in both of these areas. In addition, it is important that we recruit undergraduate students who can fully benefit from and utilize the intellectual opportunities available at a major research institution.

The following questions are designed to help the Task Force focus its attention on the CORE program and courses of study for a major. The Task Force should assess the current situation, recognizing both strengths and deficiencies, suggest improvements and changes where warranted, and identify priorities for action. In undertaking its work, the Task Force, in consultation with the Executive Committee, should develop priorities for its review. The Task Force may also, in consultation with the Executive Committee, elect to pursue additional or alternative questions. The Task Force should answer the questions in light of the University’s educational mission to offer high-quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.

1. Are the present instructional formats and deliveries of the courses in the CORE program adequate and appropriate to meet the expectations of the University and the goals of the program? If not, what should be done to improve the CORE program? Specifically the Task Force should consider facilities, technology, staffing, special programs, access, overall suitability of CORE courses, and the program's success in preparing students for upper-level work.

2. In emphasizing good teaching, we pay appropriate attention to the necessity of effective classroom instruction. Do we pay equal attention to the matter of ensuring that course content reflects the current state of the discipline? Are current developments in the discipline adequately represented and accessible in the curriculum? Do our courses challenge our students and provide an academically rigorous program? Do we have in place appropriate administrative and other measures operating at the department/college level to ensure that the overall curriculum and all courses reflect current developments in the discipline? If not, what measures should be undertaken?

3. Have the special undergraduate programs--Honors and College Park Scholars--enhanced our instructional efforts? Are these programs too costly relative to their benefits? How have these programs improved instructional opportunities for the entire University? In promoting these programs, have we reduced the instructional opportunities for all other students?

4. Has the University developed effective strategies to attract the most outstanding undergraduate students, especially those from Maryland,
who will be able to enjoy the full benefit of an undergraduate education at a major research university? What leadership role can the administration and faculty take to help our students, their parents, and the citizens of the State understand the benefits and opportunities that are part of an undergraduate education at a major research institution?

5. Are we making appropriate instructional use of technologies such as computers, the Internet, and video and audio equipment for undergraduate instruction? What service do we provide to faculty to help them make the most effective use of such technologies? Are classrooms adequately equipped to facilitate the use of such technologies? If not, what steps should be undertaken?

6. To what extent does the instructional program reflect, capitalize upon, and enhance the increasing diversity of the University, the State and the nation? Is the diversity requirement in the CORE program helpful in this regard? How does the diversity of the student body and the faculty enhance the quality of our undergraduate programs?

7. When they leave College Park, our students will enter an increasingly interconnected world, where global and international interactions will become ever more important and the solution to pressing economic and environmental problems will require global cooperation. Does the curriculum prepare our students for this new global environment? Is the diversity requirement in the CORE program helpful in this regard?

Achieving Excellence in Graduate Education

Over the next decade we will likely see an increase in the number and variety of graduate activities at the University. We will continue to recruit and to educate graduate students who will pursue academic careers. We need to ensure that these students receive the highest quality graduate education and are well prepared to be the teachers and scholars of the next generation. In the current market, it is also clear that many of our graduate students, including our doctoral students, do not pursue academic careers but pursue other professional careers. We must also ensure that our graduate programs respond to their educational needs and career interests. Consequently the University must be prepared to offer graduate and continuing education across a broad range of professional activities and train graduate students for non-academic, professional careers. In all of our graduate efforts, we must endeavor to attract superior students, offer exciting and challenging curricula, and provide energetic faculty instruction and supervision.

The following questions are designed to help the Task Force focus its attention on the quality and nature of our graduate programs. The Task Force should assess the current situation, recognizing both strengths and deficiencies, suggest improvements and changes where warranted, and identify priorities for action. In undertaking its work, the Task Force, in consultation with the Executive Committee, should develop priorities for its review. The Task Force may also, in consultation with the Executive Committee, elect to pursue additional or alternative questions. The Task Force should answer the questions in light of the University's educational mission to offer high-
quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.

1. What criteria should we employ to assess quality in graduate, especially doctoral, programs across the University? What steps should we undertake to ensure that quality is both achieved and maintained?

2. Do we need to do more to ensure quality instruction and supervision of graduate students? If so, what are the appropriate steps that we should take? In emphasizing good teaching, we pay appropriate attention to effective classroom instruction. Do we pay equal attention to the matter of ensuring that course content reflects current research and the state of the discipline? Are current developments in research and in the discipline adequately represented and accessible in the curriculum? Do we have in place administrative and other measures operating at the department/college level to ensure that the curriculum and courses reflect current research and developments in the discipline? If not, what measures should be undertaken?

3. How should we assess the need for or utility of existing or proposed graduate programs, especially doctoral programs? How should program size and content accommodate changing market demands? Is the size of our doctoral programs congruent with that of our peers? Should we encourage or discourage doctoral work by part-time students?

4. What has been the placement success of recent graduates? Are we competitive in this regard with our peers? Where do we realistically expect our Ph.D. graduates to find work in the next 5, 10, 20 years? What skills do they need (teaching, business, computer training, communication) in addition to their subject concentration? Does the acquisition of these extra-disciplinary skills affect their disciplinary studies, time in graduate school, and financial support while they are graduate students?

5. Our graduate assistants serve both as instructors or discussion leaders for undergraduate classes and as students as well. Are the current policies for graduate assistants regarding such things as financial support, work load, and course load appropriate? Should any changes be made?

6. Are there sufficient programs in place to teach graduate assistants how to teach in order to be effective lab instructors or discussion leaders? Do we need to do more? Should such teaching programs be required of all doctoral students?

7. Does the traditional academic MA degree still have a place at a research university? What should be the scope and size of MA/MS programs? Should they be encouraged to grow or be reduced, and under what conditions? Would the abolition of such programs have a
negative or positive impact on doctoral programs in affected departments?

8. What strategies should the University follow in order to recruit outstanding graduate students? What strategies can be developed to recruit outstanding international students? What progress has been made on recruitment, retention, and completion of graduate students of color and women? What weaknesses need to be addressed?

9. Are we making appropriate instructional use of technologies such as computers, the Internet, and video and audio equipment for graduate instruction? What service do we provide to faculty to help them make the most effective use of such technologies? Are classrooms adequately equipped to facilitate the use of such technologies? If not, what steps should be undertaken?

10. How should responsibility for our graduate programs be divided between the Office of Graduate Studies and Research and the academic departments? What role, if any, does the academic college have with regard to graduate programs?

11. Over the next decade the University will likely enter into more and more continuing graduate and professional education programs in response to both public opportunities and demand. How do we maintain quality in such efforts? What is the role of regular faculty in such activities? What are the costs? Who has responsibility for the administration and supervision of such programs?

**Promoting Interdisciplinary Programs and Research Activities**

Our educational mission requires more interdisciplinary curricula and research activities. Our students, both graduate and undergraduate, need the knowledge and skills that transcend traditional disciplinary boundaries and require that they expand their knowledge base into other disciplines. At the same time, faculty are discovering that some of the most significant and exciting research requires that they draw upon the expertise and knowledge of colleagues in other departments and disciplines. Consequently we need to ensure that there is a barrier-free environment at the University for such activities.

The following questions are intended to enable the Task Force to focus its attention on the interdisciplinary activities on the University. The Task Force should assess the current situation, recognizing both strengths and deficiencies, suggest improvements and changes where warranted, and identify priorities for action. In undertaking its work, the Task Force, in consultation with the Executive Committee, should develop priorities for its review. The Task Force may also, in consultation with the Executive Committee, elect to pursue additional or alternative questions. The Task Force should answer the questions in light of the University’s educational mission to offer high-quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.
1. To what extent are our undergraduate instructional program and our graduate instructional program characterized by interdisciplinary programs and activities? Do such efforts strengthen our programs? What are the drawbacks to such activities? What are the barriers to faculty cooperation in such efforts, and how can these barriers be removed? What existing programs offer useful guidelines and experiences? What are the costs and benefits of such efforts?

2. The complex social, educational, economic, environmental and technological problems facing society today will need to be addressed by interdisciplinary research and educational activities. To what extent are faculty engaged in such interdisciplinary efforts? Do such activities enhance our ability to serve through research and education? What can be done to foster these efforts and remove any barriers to faculty cooperation? What are the costs and benefits in doing so?

3. What steps should be taken to ensure and to maintain quality in interdisciplinary instructional programs? What administrative organization and supervision should be established for such programs?

4. What facilitating activities or procedures does the University currently offer to assist faculty interested in undertaking research and education efforts with colleagues from other units in the University?

5. Does the current reward system encourage faculty to participate in such educational efforts? If not, what changes regarding appointment, promotion, salary, and support should be made to encourage such participation?

**Promoting Research for Education and Service in the 21st Century**

Because the University of Maryland at College Park is a major research university—the capstone of higher education—research is an integral and very important part of our educational mission and program. Through research the University serves its students, the community, state, nation, and the world. It is important, therefore, that research activities be fully integrated into the undergraduate and graduate programs and into the University's service activities. In addition it is important that research results be made available to the external community.

The following questions are intended to enable the Task Force to focus its attention on the role of research in fulfilling the University's educational mission. The Task Force should assess the current situation, recognizing both strengths and deficiencies, suggest improvements and changes where warranted, and identify priorities for action. In undertaking its work, the Task Force, in consultation with the Executive Committee, should develop priorities for its review. The Task Force may also, in consultation with the Executive Committee, elect to pursue additional or alternative questions. The Task Force should answer the questions in light of the University's educational mission to offer high-quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.
1. What linkage should be drawn between undergraduate education and our being a major research university? How are our undergraduate programs enhanced by our research expertise and activities? Should we make research activities and the opportunities for undergraduates to work with research-oriented faculty a more important and visible part of the undergraduate educational experience? If so, what steps should be taken? What are the costs and benefits in doing so?

2. Although all doctoral students and many masters students engage in research activities, should we do more to improve the research opportunities and experiences for graduate students?

3. Does the University have sufficient support services available to assist and to encourage faculty in research activities that are intended to serve the State? If not, what support services should be established?

4. As a major research institution, the environment for research in the University is positive and pervasive, as is evident by the successful research activities and accomplishments of the faculty. But we cannot rest upon current or past laurels. Are there steps that can be undertaken to make the research environment at the University even more positive and supportive? In this regard, the Task Force should look at such matters as library and computer facilities, space, and administrative procedures for approval of grant applications, etc.

5. The University's location in the Baltimore-Washington corridor should provide opportunities to support research activities. Are there additional opportunities in this regard that we should be pursuing?

Maintaining Faculty and Staff in the 21st Century: Responding to New Opportunities and Challenges

If we are to make progress in advancing our educational mission, it is important that we develop strategies to revitalize all faculty and staff to meet the new challenges and opportunities coming in the next decade.

In the past decade the faculty, professional staff, and staff at College Park have achieved much of which to be proud. They have produced significant research accomplishments, focused intentionally and energetically on improving undergraduate education both inside and outside of the classroom, provided services that enhance the academic climate in the University, and achieved and sustained increasing national and international recognition in a wide variety of disciplines within a major research institution. At the same time, faculty and staff appear to manifest an attitude of uncertainty about the future and general dissatisfaction with the present situation that, if not addressed, can have a negative impact on our educational activities. Many faculty, staff, and departments appear to be so internally focused that they act as if they are isolated from the rest of the University. Others appear to feel disaffected from the larger community and consequently to focus only on their own work.

It is also clear that the faculty and staff cannot be secure in the belief they control their own destiny and that of the University. External groups, especially the
agencies of State government, are making increasing demands for faculty performance standards and are exerting greater influence on University policies.

We can hope that positive and visible efforts to accent and enhance University instructional and research activities will bring real and clear benefits to the institution.

The following questions are intended to enable the Task Force to focus its attention on the role and activities of the faculty in fulfilling the institution's educational mission. The Task Force should assess the current situation, recognizing both strengths and deficiencies, suggest improvements and changes where warranted, and identify priorities for action. In undertaking its work, the Task Force, in consultation with the Executive Committee, should develop priorities for its review. The Task Force may also, in consultation with the Executive Committee, elect to pursue additional or alternative questions. The Task Force should answer the questions in light of the University's educational mission to offer high-quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.

1. How have the events of the last five years affected our ability to retain and to recruit an active and diverse faculty and staff? What efforts produced outstanding appointments? What problems created serious losses or deficiencies? What are the implications for the future?

2. Can we do more to promote greater student-faculty interaction in the university, realizing that the student body is primarily non-residential? What measures can be undertaken to increase faculty-faculty interaction in the university, realizing that the faculty is entirely non-residential?

3. What efforts are we now pursuing and what additional strategies can we develop to provide for appropriate and meaningful recognition of quality teaching at all levels?

4. How can the University develop an effective notion of a university professor that clarifies the appropriate mix and level of research, teaching, and service, and then ensures that such a professor is valued, supported, and rewarded? How are activities such as student advising, participation in community activities, and student group advising identified as faculty priorities, and are they adequately rewarded? Is the traditional reward system which emphasizes research and publication and graduate instruction adequate or suitable for the next decade? If not, what changes should be made in the reward system?

5. How can staff be integrated into the educational process in a more formal manner? How can the University clarify the role of staff to assure them that they are valued, supported, and rewarded? What changes need to be made in the reward system for staff?

6. How can we ensure that the faculty and staff, especially the most gifted and productive ones, have an institutional loyalty that matches their loyalty to their discipline or area of expertise?
7. How can staff be more integrated into the research mission of the institution? How can staff be more directed into seeking external support for the University? How can the national status of the professional staff be better used to the institution's advantage?

8. There is increasing pressure on faculty to seek external funding to support their research activities and to support special programs. How can we encourage and reward such efforts without also creating a second class, unfunded faculty? Has the existence of or prospect for external support distorted faculty efforts and University priorities? Should we attempt to place any limits or checks on such efforts to raise external funds?

9. Are there any steps that the faculty and staff should undertake to ensure that the traditional university role in determining academic matters is understood and respected by the Maryland Higher Education Commission and the other agencies of the State Government?

10. How can support staff in non-professional roles be better integrated into the academic community? How can they be helped to feel more like valued members of the community? How can they be better rewarded for extraordinary efforts? What can be done to enhance their institutional loyalty?

3. Methodology

The Executive Committee will oversee a self-assessment process that reflects the principles of continuous quality improvement (CQI). Since 1993, the University has actively explored the use of CQI throughout the institution, emphasizing practices that demonstrate a focus on customers, data driven decision-making, process management, prevention, cross-functional problem-solving, and total employee involvement. The CQI approach has proven successful in various ways, and it is particularly appropriate for accreditation activities.

Process

Upon recommendation from the Executive Committee, the Provost will select leaders for the Task Forces that will each focus on the five key topics for the self-study: undergraduate education, graduate education, interdisciplinary programs, research and service activities, and faculty in the 21st century. In conjunction with the Provost's office, Task Force leaders will write a draft charter based on the Task Force charge prepared by the Executive Committee (Section 3). The charters are intended to provide initial guidance for the Task Force and will include a background statement about the accreditation process and self-study goals, a section on the Task Force's scope of inquiry, and a list of principal constituents who should be consulted during the Task Force's activities.

The Task Force leaders, with guidance from the Executive Committee, will select members of their Task Force. The target size for each Task Force will be eight (8) people. Participants will reasonably reflect the diversity of the University. Each Task Force will be given a target of 120 days to complete its charge. The project
deadline is intended to help increase the Task Force's focus and maintain movement toward its final product. Each Task Force will be instructed to provide the Steering Committee with a final presentation and a limited written report (no more than 30 pages) to substantiate its presentation.

Three steps will be taken to promote the success of these five self-study Task Forces. First, each Task Force leader will be asked to serve on the Steering Committee to assure inter-Task Force coordination. Second, a graduate assistant will be assigned to each Task Force to assist with administrative details. Finally, each Task Force will have access to a group facilitator trained by the Office for Continuous Quality Improvement. The group facilitators will assist the Task Force leaders with planning meetings, provide interventions as needed to increase Task Force communication and decision-making, and serve as the Task Force's internal expert on CQI tools and techniques.

As a first step in involving key constituents, each Task Force will identify a method for requesting information from its resource group and will prioritize the questions set forth in the scope of inquiry statement. Changes and additions to the list of questions could be accepted at this time. Each Task Force with then follow three general steps as a first problem-solving process: (1) problem-definition, (2) cause-finding, and (3) solution identification.

Each Task Force will be encouraged to have no more than three to four priorities. Based on the priorities in the scope statement, each Task Force will review existing institutional data and reports. If necessary, the task forces may seek approval from the Executive Committee to obtain additional data from relevant constituents that would fill obvious 'holes' or strengthen the Task Force's understanding of critical issues. After reviewing the appropriate data, each Task Force will write problem/situation statements that capture the status of key issues raised in the scope. Such statements will describe principal trends as well as gaps in the performance of the institution with regard to standards, customer expectations, goals, or ideal conditions.

For each of their problem/situation statements, the Task Forces will then conduct an analysis of root causes to determine the unique and common conditions related to the most significant gaps identified. Finally, each Task Force will devise a list of strategies for improvement in response to their understanding of root causes. Task Forces will be asked to incorporate strategies from current improvement plans, such as committee reports and the University's Strategic Plan. Final presentations and written reports will focus on introducing and justifying these strategies for improvement. After each Task Force has completed its work, the Executive Committee will work to integrate the findings and recommendations into a final self-study report.

**Timeline**

The schedule for completion of the self-study has been planned to allow ample time for a thorough analysis and discussion at each stage.

1. November 1995: Appoint Task Force members
3. April 1996-May 1996: Executive Committee assesses reports of Task Forces
5. September 1996-October 1996: Presentation of draft to campus for
discussion and review
7. December 1, 1996: Submit document to MSA
8. December 1996: Preparation for visit of MSA Evaluation Team

4. Resources for Task Force Reports

The work of each Task Force is formidable but manageable, and resources are
available to aid the Task Forces. Each Task Force will be assigned a graduate
assistant, who will provide support for the work of the Task Force.

The Provost has appointed a special committee to work on outcomes
assessment data and prepare a Student Learning Outcomes Report. The Office of
Institutional Studies, which reports to the Associate Provost for Planning, has been
gathering statistics and information for this project. The Assistant Director of the
Office of Institutional Studies is the staff coordinator. The Assistant Director will be
available to consult with the Task Forces and provide them all relevant material on
outcomes assessment. The Task Forces will have full recourse to statistics, surveys,
analysis of data and evaluations that pertain to outcomes assessment and will fully
incorporate conclusions from this material in their reports.

Much of the information needed to address the questions is currently available
in a variety of reports, and it is expected that these reports, not new data gathering,
will be the foundation upon which the Task Forces build. Some reports will probably
be useful to all of the Task Forces; others may be narrower in their use. The UMCP
Mission Statement, the several reports on enhancement, in particular, "Enhancing the
College Park Campus: An Action Plan," the reports supporting "Hard Choices," and,
most recently, the reports relating to Strategic Planning will probably serve all the
Task Forces. In addition the particular Task Forces will want at least to look at the
following special reports as indicated:

1. Achieving Excellence in Undergraduate Education

Report of the Campus Course Access Committee; Report on Admissions and
Advising; Retention Action Plan; Student Learning Outcomes; Access Is Not
Enough; Report of the Committee on Excellence Through Diversity; Diversity
Goals Action Plan and Status Report; Resolution on Undergraduate Academic
Advising; CQI Improvement Reports on Large Classes, Financial Aid, Student
Employment, and Student Climate; Enrollment Growth Considerations; Non-
returning Student Report

2. Achieving Excellence in Graduate Education

Campus Policy on the Training, Guidance, Supervision and Evaluation of
Teaching Assistants; Continuing Education; Access Is Not Enough; Report of
the Committee on Excellence Through Diversity; Diversity Goals Action Plan
and Status Report
3. Promoting Interdisciplinary Programs and Research Activities

Report of APAC subcommittee on Centers and Institutes; Just Do I.T.--Shaping the Future--The University in the Information Age.

4. Promoting Research for Education and Service in the 21st Century

Continuing Education; Enrollment Growth Consideration; Report of APAC subcommittee on Centers and Institutes; Just Do I.T.--Shaping the Future--The University in the Information Age.

5. Maintaining Faculty and Staff in the 21st Century: Responding to New Opportunities and Challenges

Strengthening a Partnership: Shared Governance at UMCP; Recommendations for Shared Governance at UMCP; Periodic Evaluation of Faculty Performance; Access is Not Enough; Report of the Committee on Excellence Through Diversity; Diversity Goals Action Plan and Status Report; Periodic Evaluation of Faculty Performance; Policy on Review of Academic Units; Report of APAC subcommittee on Centers and Institutes; Just Do I.T.--Shaping the Future--The University in the Information Age.
THE EDUCATIONAL MISSION OF A PUBLIC RESEARCH UNIVERSITY:
THE MIDDLE STATES SELF-STUDY

APPENDIX D

Report of Task Force on
ACHIEVING EXCELLENCE IN UNDERGRADUATE EDUCATION

July 1996
Submitted by:

Claire Moses, Chair
Robin Bernstein
Shirley Logan
Katherine McAdams
Danuta Nitecki
Thomas Regan
Scott Wolpert

THE UNIVERSITY OF MARYLAND AT COLLEGE PARK
Table of Contents for Appendix D

I. Introduction ................................................   1

II. Curriculum ................................................   1
   A. With regard to breadth in the curriculum ..........   2
   B. With regard to depth in the undergraduate curriculum ....   6
      1. Special Programs of Study .......................   6
      2. Upper Level Seminars and Capstone Courses .... 8
      3. Experiential Learning ............................   8

III. Pedagogy and The Learning/Teaching Environment ...............   9

IV. Recruitment and Retention ...................................  14
   A. Recruitment .........................................  14
   B. Retention ...........................................  17

V. The Future ................................................  18
   A. For the CORE General Studies Program .............  20
   B. Involving Faculty In More Undergraduate Teaching ....  22
   C. Goals for Undergraduate Enrollment ...............  24
   D. Conclusion .........................................  25

VI. Tables ......................................................  27
   Table 1 .................................................  27
   Table 2 .................................................  28
   Table 3 ...................................................  29
   Table 4 ...................................................  30
I. Introduction

In the last ten years, the University of Maryland at College Park has acted to improve the quality of its undergraduate education. Several key studies, particularly "Promises to Keep: The College Park Plan for Undergraduate Education" in 1987 and "Enhancing the College Park Campus: An Action Plan" in 1989, have assessed the state of undergraduate education and recommended innovations.

The College Park campus has changed much in the years since these reports. All of the reports' recommendations have been explored; many have been successfully implemented; some have been abandoned. This moment is prime, then, to step back and reconsider the goals and strategies outlined in the last ten years, the successes and failures of implementation, and the possibilities for the future.

We begin our review in 1988, when the College Park Senate and the Board of Regents approved the ambitious plan articulated by the Campus Senate Ad Hoc Committee on Undergraduate Education in its report, "Promises To Keep: The College Park Plan for Undergraduate Education" (also known as the Pease Report, after the Committee's chair, Professor John Pease).

The report was issued in response to the decision by the campus to divide itself into twelve colleges, instead of the previous five divisions which each included both liberal arts programs and professional programs. Many felt that such a division, resulting in eight professional colleges and four liberal arts colleges, tipped the scales heavily in favor of professionalism and minimized the influence of a general, non-professional undergraduate education. Concern about the potential danger this shift posed to undergraduate education led the Campus Senate to set up this Senate Ad Hoc Committee on Undergraduate Education.

In the context of this move toward specialization, then, the central recommendation of the Pease Report was that there be an increase in time, energy, prestige, and resources apportioned to undergraduate education in general and particularly to the General Education Program. These objectives were to be achieved by changes in several areas, including curriculum, pedagogy and the learning/teaching environment, and admissions. This study examines the progress made in these three specific areas.

II. Curriculum

The Pease Report emphasized the importance of active learning, intellectual self-consciousness, and of incorporating both breadth and depth into the undergraduate curriculum.

[Undergraduate education at College Park seeks to enable students to develop and expand their use of basic academic and intellectual tools. Students are educated to be able to read with perception and pleasure, write and speak with clarity and verve, handle numbers and computation proficiently, reason mathematically, generate clear questions and find probable answers, identify and evaluate evidence, develop reasoned arguments, reach substantiated conclusions, and accept ambiguity. Students also study in depth and acquire a]
substantial competence in a coherent academic discipline (Pease, 15).

A. **With regard to breadth in the curriculum:**

The Pease Report, as approved and adopted by the Campus Senate, mandated a program of studies outside the student's major at both the introductory (100-200-level courses) and the advanced (300-400-level) stages of a student's career, and that a Senate faculty committee be established to approve and regularly reassess courses for inclusion on a limited, select list of CORE courses.

Fundamental Studies English (one 100-level course; a second 300-level “professional writing” course) and mathematics requirement (any 100- or 200-level Mathematics or Statistics course except Math 210 or 211) would be retained. Special freshmen seminars, taught by seasoned faculty, that focused on major texts and concepts through extensive discussion and paper writing were to be established. To promote broad conceptualizing in courses across the disciplines, students would be required to take nine Distributive Studies credits in the arts and humanities, nine in social science, and ten in mathematics, science, and technology (at the 100-200 level). Students were also to take two courses outside their majors from a list of specially approved courses at the 300-400 level. It was also required that each student take one course from an approved list of human cultural diversity courses. A final curriculum recommendation was that each department develop a "capstone" course for its major field of studies. (The Pease Report also recommended exploring the establishment of a required speech communication course; but the Senate decided against including this requirement.)

In the **English and Mathematics Fundamental Studies** courses, a number of improvements have been implemented since 1988. In keeping with the Pease Report's multi-disciplinary focus, the freshman writing course has undergone revisions to strengthen its focus on academic argumentation in general, thus better preparing students for scholarly work in their other courses, and specifically in their own disciplines. Further, all teaching assistants for English 101 are now required to take a preparatory graduate course in language and rhetoric (English 611). The range of choices in the upper-level writing requirement has expanded to include courses with emphases in legal, business, and medical writing along with the two original courses in advanced composition/argumentation and technical writing. What might be interpreted as a trend towards specialization is offset by a conscious application of good writing principles across all versions of the course. A series of workshops conducted by the campus-wide Center for Teaching Excellence (see below) serve as one example of initiatives designed to equip faculty of non-English department courses with ways to incorporate more writing into their assignments and to factor quality of writing into evaluation of performance.

Careful screening of requests for exemption from the two writing courses is maintained. For example, according to the Transfer Credit Evaluation Center (TCEC) of the Office of Records and Registration, of the 1,358 transfer students accepted to UMCP in fall 1995, 590 came from 4-year institutions, but only 13 had matriculated a writing course that qualified them for exemption. Additionally, campus writing program administrators have collaborated with other public institutions in the state that offer writing courses satisfying the requirement to ensure uniformity. The most recent result of this collaboration was the "Statement of Expectations for Freshman Writing"
Placement procedures followed to help students fulfill the one-course mathematics requirement have improved and students are encouraged to satisfy the requirement early in their studies. As a follow-up to the placement examination, administered during orientation, students are advised by graduate students in mathematics as to the implications of their scores. This advising takes place when the students are informed of results on the afternoon of testing day. The Schedule of Classes indicates that the course must be attempted within the first thirty credits and passed within the first sixty. By completing the requirement early, recent high school graduates can draw on their secondary school mathematics experiences for support. Further early matriculation in a foundational mathematics class provides the background needed for many upper-level courses. Currently, however, the Math department finds that the mechanism in place to flag students who have not complied does not always function as it should.

One positive change coming out of the undergraduate mathematics program is the recent addition of Math 113, College Algebra with Applications. This Fundamental Studies course was developed for certain majors in BSOS, Business, and Life Sciences which do not require the rigor of Math 115, Pre-Calculus. Math 113 also prepares students in these majors specifically for their subsequent required mathematics course, Math 220, Applications of Calculus. As a result, more students in these majors now successfully complete their CORE mathematics requirement upon their first attempt.

A second positive change is in the teaching of calculus. Reduced class size and active learning not only improved students' performance in this class, but also improved retention rates. A study comparing the "close-contact calculus" with the larger, recitation sections found that 3 years after taking this course, retention rates for the close-contact calculus students was ten percentage points (at 90%) higher than for the other students (80%).

The CORE requirement of nine distributive studies courses, designed to cover the broad areas of knowledge that each student should be familiar with--arts and humanities, social sciences and history, and natural science--has also been successfully implemented. Although the earlier General Education program included distributive studies course requirements, the CORE developed a much stricter set of criteria for inclusion, and established a faculty committee not only to approve but also to regularly reassess courses, thus ensuring that the goals of the CORE are met in all approved courses.

And it appears that over time the procedures for approval and assessment have been helpful in improving the quality of courses--not simply disapproving "bad" courses, but rather facilitating their revision and ultimate approval. The faculty course review working groups, in turn, have been thoughtful in taking into account some criticism of their process, particularly in their initial reluctance to approve interdisciplinary courses for CORE.

The Human Cultural Diversity requirement was new under CORE. It has been well received by students, many of whom take more than one Diversity course. Over the six years since introduction of the Diversity requirement, the range of courses
being proposed for CORE diversity has broadened. This presents faculty reviewers with special challenges and opportunities in maintaining and strengthening this important area of CORE. Originally, a working group that focused on the Diversity courses was responsible for the approval and periodic review of these courses. Today, this responsibility is shared by various discipline-specific working groups whose primary responsibility is to the Distributive Studies component of CORE. The taskforce suggests the reestablishment of an interdisciplinary group focused on the Diversity component of CORE in order in order to give Diversity courses fuller attention.

Intended as a two-year trial program, only one year (1990) of College Park Seminars for freshmen was run. The pilot seminars, developed around the theme of technology, received favorable reviews, but a lack of faculty desire to propose and teach seminars limited the reach of the initiative. With the reduction of the total campus budget in the early 1990s, the University abandoned further inquiry into the reasons for the lack of faculty support for the freshman seminars. Similarly, the University dropped its consideration of appropriate rewards to change the situation. The entire College Park Seminars initiative was subsequently abandoned. Although freshmen seminars for honors students meet the goals of the abandoned seminars, these are available only to a limited number of students and the possibility of offering all incoming freshmen the experience of a small, intensive course appears remote at this time.

The two-course requirement in CORE Advanced Studies has also run into difficulties, with too few faculty proposing and offering to teach advanced courses appropriate for non-majors. From its inception, the requirement was flexible in permitting students to substitute a CORE-approved senior Capstone course in their major; but considering that the fall 1996 schedule of classes lists only twenty-four CORE—approved Capstone courses, with eleven being offered by the College of Computer, Mathematical, and Physical Sciences and the College of Engineering, this is not a viable option for most students. Subsequently students were permitted to substitute a senior or honors thesis, or an independent studies course outside the major for one of the Advanced Studies courses, and then, in December 1994, the Advanced Studies requirement was relaxed and the restricted list of approved courses dropped. Students must still take 2 upper-level courses outside their major; but any and all courses (not only special courses in Social Problems or Ways of Knowing) can fulfill the requirement.

The introduction of CORE to UMCP presented numerous problems associated with delivering courses under the old general education plan while building new offerings to meet requirements of the new plan. These problems were compounded by the budget cuts imposed on the University because of the state's financial problems.

Nevertheless, during the transition the University used a combination of approaches developed by ACCESS (Advisory Committee on Course Enrollment Statistics and Strategies) to ensure that students were able to enroll in the courses needed to fulfill CORE requirements. These approaches included the development of a Course Planning Cycle which provides information to Colleges and Departments concerning projected course demand, the creation of a flexible pool of funds (approximately 1% of the instructional budget) allocated annually by Academic Affairs to meet short term course availability problems, and the managed flow of
information to advisors about openings in underutilized courses. The ACCESS process for solving course availability problems is becoming a national model studied by other institutions.

Severe course problems initially existed in the Fundamental Studies areas as well as the following Distributive Studies areas: Humanities, Behavioral and Social Sciences, and Life Sciences labs and non-labs). The graphs (below) indicate that these problems have been eliminated except for in Humanities (Arts) and Life Sciences (non-labs). In these two remaining areas, significant improvement has occurred. Comparison of the 1993-1994 graph to the 1995-1996 graph demonstrates the University's ability to increase CORE Distributive Studies offerings overall to keep pace with the increased enrollment of students at the lower level in recent years. In the late 1980s, UMCP students routinely experienced problems registering for required general education courses at the appropriate times in their academic programs. By the 1990s, feedback from the advising community no longer mentions course availability problems as a major issue.

B. With regard to depth in the undergraduate curriculum:

Although the responsibility for assuring depth in the undergraduate curriculum had been considered the responsibility of the departmental major, the Pease Report recommended that campus-wide programs be developed to enhance learning for undergraduates. Such programs, the committee suggested, would provide an academic, intellectual climate for "studies in depth" at all levels in the curriculum, not only in the major.

Here, "depth" is used to indicate the extent of intellectual challenge that students must meet, as demonstrated through research, discussion, application and writing. The most traditional symbol of depth is the long paper or thesis; newer indexes of depth include group analysis of complex, real-life problems or experiential learning through either internships and service learning or through studies in another cultural setting. Kolb (1984) emphasizes the impact of activity and experience on depth of learning, saying, "Knowledge is continuously derived and tested out in the experiences of the learner" (p. 27). Kolb suggests that no "body of knowledge" is sufficient education in and of itself, but that ideas must be "formed and re-formed through experience" (p. 26).

Depth in the undergraduate curriculum--supervised experiences that go beyond learning and reciting a body of knowledge--appears to occur in three major ways at the University of Maryland.

1. Special Programs of Study. Students may pursue studies through a number of special programs that allow students to read and discuss complex intellectual ideas, both inside and outside the major.

*The University Honors Program has been recognized as one of the best in the country. This living-learning program is open through application to all students who maintain an average above a 3.0. It is generally agreed that seats in the University Honors Program are--and should remain--limited, especially if the quality of the program, based, we believed, on the program's ability to offer freshmen and sophomore seminars, is to be maintained. An unexpectedly large number of 780
entering freshmen in fall 1996 accepted UMCP's invitation to the Honors Program, but
the usual number is 600. In addition, some 30 departments on campus have
departmental honors programs, where talented students may pursue independent
research or creative endeavors. Graduation with the designation of honors requires an
approved program of honors coursework in either departmental programs or the
university program.

*Two new University Honors programs in collaboration with the College of
Engineering (Gemstone) and the College of Arts and Humanities (Honors Humanities)
have been developed and have accepted freshmen students for fall 1996. Gemstone,
a collaboration between University Honors and the Clark School of Engineering,
creates interdisciplinary teams of talented students who will work together for four
years to produce a solution to a major social-technical issue such as cost efficient
transportation or privacy and the internet. About half the students are Engineering
majors; the others originate from colleges such as Behavioral and Social Sciences;
Business and Management; Computer, Mathematical, and Physical Sciences; and Life
Sciences. In addition to a one credit advising colloquia, students will take three credit
courses at the end of their first year, and beginning of the second and third years to
develop their proposals. Honors Humanities, a collaboration between University
Honors and the College of Arts and Humanities, is aimed at academically talented
students in their first two years who would like to build a strong foundation in the
humanities, regardless of their majors. The program involves a "gateway" team-taught
opening seminar in students' first semester, a choice of three interdisciplinary seminars
in the fourth semester, four special honors-versions in the humanities, and two
additional semesters of foreign languages. Students are urged to live together in a
special dormitory.

*To increase curricular depth for students who can not be accommodated in
the Honors Program, the University established the College Park Scholars program
in 1994. This program selects 575 incoming freshmen each year to participate in an
interdisciplinary, thematically linked program of studies and an intellectually enriched
residential program. Students also have special opportunities to participate in
internships, service learning and volunteer opportunities, as well as to study abroad.

Many of these programs attract high-caliber students who interact with others
to create intellectual challenges in and out of the programs themselves. These students
stimulate intellectualism everywhere on campus.

*A somewhat different strategy, but one also intended to improve the quality
of the first two years of an undergraduate's experience at College Park, have been the
program of First Year Focus and Course Clusters designed for intellectual
coherence and social cohesion by "making the big store small." These are sets of
classes that are limited to 20-25 students. Each set of classes is attended by a cohort
of students that focuses on a single theme, such as "Body and Mind" or "Justice for
All?" In this way, students see the relevance of all disciplines to social issues, and
they also have close contact with one another and with faculty, giving a "small
college" feel to the program.

The new CORE World Courses, to be launched in the fall of 1996, are also
intended to offer a much larger number of students a special course opportunity. The
team-taught interdisciplinary World Courses, which also satisfy CORE distributive
Appendix D

studies requirements, will explore contemporary, broad topics from multiple perspectives, but will be taught in classes larger than seminars and will use some teaching assistants. Although the multidisciplinary nature of such courses presents the logistical challenge of multiple staffing, we urge the campus to encourage the further development of this initiative.

2. Upper Level Seminars and Capstone Courses. The Pease Report also enhanced depth in the curriculum by encouraging departments to establish upper-level seminars and capstone courses for all majors rather than only for those who choose honors or other special programs. In concluding work in the major, students in senior seminars and capstone courses would have contact with scholars and professionals in their selected fields. In this way, a model of intellectual discussion and analysis would be provided for all students prior to graduation. Central to these courses would be complex analysis, both in groups and individually, and extensive research and writing for each student. Where established, these initiatives have been successful; but only a few departments yet offer and/or require senior seminars or Capstone courses for all majors.

3. Experiential Learning. A third avenue to depth in the undergraduate curriculum is experiential learning. Opportunities for learning outside the curriculum abound on campus in the 1990s. Some majors, such as education, journalism, and women's studies—as well as special programs, such as certain tracks in the College Park Scholars—require internships. Participation in all kinds of internships and experiential education has increased in the past decade: The Career Center sponsors up to ten workshops each year to help students find internships, part-time and co-op positions that relate to programs of study. The Center has a World Wide Web site and publishes a constantly updated list of internship and job opportunities for students. Other campus agencies, such as the Study Abroad Office, help students with learning opportunities that extend beyond classrooms in College Park. Some 250 students each year participate in Study Abroad.

III. Pedagogy and The Learning/Teaching Environment

A second major concern in the Pease Report was pedagogy and the learning/teaching environment. With regard to these areas, the committee recommended:

- staffing Distributive and Advanced Studies courses with regular faculty to the extent possible;
- promoting modes of active teaching involving students in small classes;
- and discontinuing the pass/fail grade option for CORE courses.

The 1989 "Enhancing the College Park Campus: An Action Plan" addressed similar issues with regard to undergraduate education and set specific goals that required additional funding resources. These goals remain in place even with the changes in campus finances. They include:

- reducing the student-faculty ratio,
* increasing incentives for faculty involvement in undergraduate teaching and encouraging innovative course development using new technologies,

* starting a summer program for development of faculty expertise in scholarship on women and gender, and

* creating a campus-wide Center for Teaching Excellence.

Finally, a number of other means for improving undergraduate teaching were set out in a supporting document to the Pease Report, prepared in May 1990 by a Subcommittee on Rewarding Undergraduate Teaching:

* that a minimum component for teaching performance when considering appointments, promotion, tenure and merit pay be set;

* that Deans and Chairs be permitted to "contract" with faculty for a prescribed short-term redistribution among teaching, service and research.

* and that faculty be encouraged (and eventually, for tenure and promotion, be required) to create a Teaching Portfolio.

The Subcommittee Report also detailed possible additional incentives:

* that the Dean for Undergraduate Studies provide new resources for faculty development;

* that colleges and departments establish rewards for outstanding teachers;

* that visiting positions for teaching scholars to aid in curriculum and faculty development.

* that new honors, awards, and rewards for teaching excellence be established at the campus level;

* and that the President, Provost, Deans, Chairs, student organizations and campus media be involved in publicizing teaching excellence.

Substantial progress has been made on the recommendations of all these studies: First, the Pass/Fail grade option has been eliminated for General Education courses. Also, student-faculty ratios have been substantially reduced. Undergraduate enrollment has decreased as follows:

<table>
<thead>
<tr>
<th>Undergraduates</th>
<th>Full time</th>
<th>Part time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>in 1985</td>
<td>25,686</td>
<td>4,870</td>
<td>30,556</td>
</tr>
<tr>
<td>in 1990</td>
<td>21,543</td>
<td>4,128</td>
<td>25,671</td>
</tr>
<tr>
<td>in 1995</td>
<td>21,022</td>
<td>3,351</td>
<td>24,373</td>
</tr>
</tbody>
</table>

Meanwhile, the size of the faculty has increased slightly:

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Fulltime</th>
<th>Parttime</th>
<th>Total</th>
</tr>
</thead>
</table>
There are also a significant number of incentives for involving regular faculty in undergraduate education at the campus level, including new programs that reward excellence in undergraduate teaching while offering the opportunity (and funding) for development of new courses and pedagogical innovations: the Lilly-Center for Teaching Excellence Teaching Fellows (ten per year); the Distinguished Scholar Teacher program (five or six per year); the Celebrating Teachers Award (nominated by top graduating seniors); and the Departmental Excellence in Teaching Award (nominated by department chairs).

* There has also been an increase in departmental teaching awards. The 1996 UMCP brochure, "Faculty Awards and Development Programs," lists 15 departmental awards recognizing excellence in undergraduate teaching.

* The Institute for Instructional Technology (IIT) was formed in 1995, jointly sponsored by the Computer Science Center and the Center for Teaching Excellence (see below), to provide training and support services for faculty wishing to adopt new technologies for their teaching. IIT conducted a two-week training program in August of 1995 with fourteen attendees; IIT will conduct a series of workshops this coming summer. IIT also provides materials and support for the A.T.&T and IBM-TQ teaching theaters.

* The Curriculum Transformation Project (CTP) was set up to assist faculty in including more materials on diversity (race, class, sexuality and ability) in the undergraduate curriculum. Since 1989 a total of 82 faculty have participated in CTP programs. More than three-fourths of the CTP participants have since submitted revised syllabi for courses taught. The Engineering College has this year started a
CTP; 9 faculty and undergraduate teaching fellows are involved.

* The Center for Teaching Excellence (CTE), established by the Dean for Undergraduate Studies, is perhaps the most ambitious of these initiatives. Its purpose is to support campus-wide efforts to enhance and reform undergraduate education, and to offer tangible assistance to individual faculty and T.A.s, as well as to their departments and colleges. CTE offers resources, services and on-going projects, workshops and conversations. In addition to the Lilly-CTE Teaching Fellows Program, CTE currently also offers training and support to improve instructors' sensitivity to diversity and enhance inclusion and respect for all students (the Classroom Climate Project); training for high achieving, advanced undergraduates who participate in the Undergraduate Teaching Assistant Program; Graduate Teaching Assistants Orientation to compliment the more specific training at the level of the unit; and Instructional Improvement Grants.

CTE also provides Resource packets and videos and printed materials on topics including Cooperative Learning, Effective Lecturing and Effective Discussions; hosts a series of workshops and conversations addressing current topics in teaching and learning (sessions are open to the university community free of charge); and publishes a quarterly newsletter featuring highlights of CTE activities, faculty projects and innovations related to teaching in a wide variety of disciplines, as well as practical tips on improving instruction.

The CTE Annual Report shows that for 1994-95, eleven workshops were conducted with approximately 250 participants. Since the Fall of 1994, CTE has also run campus-wide (new) teaching assistants orientations, as well as a program for undergraduate teaching assistants (involving fifty undergraduates being assigned to faculty mentors). CTE awards between $40,000 and $50,000 per recent year for instructional improvement grants with current awards for CORE Human Cultural Diversity Courses and for college/department teaching mini-centers (providing for some: release time, graduate student support, materials and workshops at the "grass roots" level). The mini-centers seek to offer materials and support tailored to departmental needs. CTE also maintains a listserv and a web-page, which includes a more complete listing of available resources:

(URL http://www.inform.umd.edu:8080/EdRes/FacRes/CTE/)

The recommendations from the "Subcommittee on Rewarding Undergraduate Teaching" called for changes in procedures and some changes in emphasis. Some progress has been made, but not in a uniform manner. Rather little has been done on some recommendations, while there has been significant improvement in certain directions.

* There has been an increase in the emphasis on undergraduate teaching in considering appointments, promotions and tenure, although minimum components have not been set. The August 14, 1991 letter to Chairs from Victor Korenman on Promotion/tenure procedures contains only five sentences on evaluation of teaching. The current guidelines, dated July 26, 1994, contain a one-page, very thorough prescription for the evaluation of teaching and advising.
* Concerning the creation of a **College Park Teaching Portfolio**: The campus is now making an initial move in this direction with the Periodic Evaluation of Faculty Performance (post-tenure review).

* Concerning **incentives** for involving faculty more fully in efforts to improve undergraduate education: Faculty development funds for new course development, teaching innovations, and teaching improvements have been provided by the Dean for Undergraduate Studies through CTE, by the deans of the various colleges, and at the departmental level. (One example of support for faculty development is that offered by the Center for Teaching Excellence for the new, multi-disciplinary, team-taught World Courses, which are preceded by a four-week faculty summer workshop; stipends are provided.) As already noted, the Faculty Awards and Development Programs for 1996 lists fifteen departmental awards recognizing excellence in undergraduate teaching; CTE also administers new rewards for teaching excellence.

* The University's top administrators, student organizations, and the campus media have also become more involved in **publicizing teaching excellence**. For example, the Intrafraternity Council, Panhellenic Association and Pan-Hellenic Council all have outstanding teacher awards; the Office of Campus Programs has an outstanding advisor award; The Office of Minority Student Education has a faculty award; the national leadership fraternity Omega Delta Kappa makes two to four leadership awards per year; the Association of Parents has both an outstanding teacher and advisor award. There has been an apparent increase in campus media coverage with articles on undergraduate teaching successes in Outlook and the College Park magazine, although coverage in the Diamondback is still rather limited.

Overall, a significant number of the recommendations for involving faculty in undergraduate teaching and improving undergraduate education have actually been acted on in spite of our budget cutbacks. For example, the Center for Teaching Excellence, although a recent creation, already has programs affecting and involving the entire campus. A comparison of the chartering document, "A Proposal for the Center for Teaching and Learning," dated July 1990, with this year's CTE programs shows that almost all of the original proposed programs are now in place. CTE in conjunction with the Office of the Dean for Undergraduate Education and other programs has had a real impact on the quality of undergraduate education. Nevertheless, current programs have only reached a fraction of the faculty—the most motivated classroom teachers. CTE has very successfully completed its first phase; the mission for the second phase should be to reach a significant number of the classroom teachers (faculty, instructors, and teaching assistants). The task will require a broad-based plan involving recognition, incentives and programs tailored to individual disciplines. As a simple example of an area in which we can improve, 15 awards for teaching, as cited above, is far too few for a campus with 2100 faculty.

Visiting positions, however, have not been created for teaching scholars to aide in curriculum and faculty development.

**IV. Recruitment and Retention**

**A. Recruitment**

Admissions constituted a third major concern of the Pease Report, the
subsequent "Enhancing the College Park Campus" report, and other recent reports. As stated in President Kirwan's May 10, 1989 letter to the Board of Regents: "[UMCP] aim[s] to become an institution that attracts outstanding students from Maryland and around the nation. We must make changes in support for undergraduates...that will send a clear signal to prospective students that things have changed at College Park. We will strive to recruit a highly diverse group of men and women who share a seriousness of education purpose."

In "Enhancing the College Park Campus," three admissions goals were set. First, to increase the admission, as freshmen, of students whose academic profiles suggest exceptional ability. Indeed, “flagship status,” conferred on College Park with the reorganization of the University of Maryland system, was directly linked to educating the State’s very best students. For example, it was recognized that too many of Maryland’s Merit Scholars attend college out-of-state, and that the loss of human capital to the State is enormous. Second, the campus committed to retaining an ever-increasing number of students who have excelled in lower division studies, and to attracting especially promising transfer students. And thirdly, the campus affirmed its equally strong commitment to recruiting a large and increasing number of students from groups that have not been served well by higher education in the past.

To meet these goals, UMCP has increased overall recruitment efforts, and especially our efforts aimed at high-achieving students and underrepresented groups. We have expanded on-campus visitation programs, including a summer science, mathematics, and engineering program to interest women and minorities in these fields. An improvement in communication has been made with the population of potential applicants through a new electronic information service to high schools and community colleges throughout Maryland. We strive to enhance the Maryland Alumni Admissions Program, which encourages alumni participation in student recruitment.

More proactively, UMCP has taken note that the many Special Programs designed to bring depth to the curriculum also have a recruitment function, and these programs have been promoted and highly publicized in the State and nationally. Certainly the strengthening of the Honors Program has attracted more of the State’s very best students (see below), and the College Park Scholars (CPS) program has successfully drawn in an increased number of students at the next level of achievement. Currently, UMCP offers 36.5 percent of freshmen the special recognition of joining the Honors or College Park Scholars programs.

UMCP’s recruiting strategies have also included scholarships targeted to the groups it especially wishes to attract to campus. Scholarships awarded on the basis of merit are intended to recruit the highest achieving students. From [ADMISSIONS OFFICE WILL PROVIDE DATE] to 1995, we provided 100 four-year, full-expense Francis Scott Key scholarships for academically talented freshmen of all races and backgrounds. UMCP also provided special scholarships to recruit African Americans. These Banneker Scholarships, however, were ruled illegal in a number of court cases--up to and including one in the U.S. Supreme Court--of national significance. The Campus fought hard to defend the Banneker scholarships; and, having lost, has committed itself to identifying other strategies to maintain a diverse student body. The name “Banneker” has been incorporated into our renamed merit scholarship program (Banneker/Key Scholars) as a signal of that commitment; and the
number of Banneker/Key awardees has been increased to 150 for 1996.

As a result of these efforts, the quality of incoming freshman talent levels has continued to increase as measured by several indices. The recentered SAT scores of incoming freshmen have continued to rise each year. The data in the table below show how our incoming freshman class has a significant increase in numbers at the high end of the distribution and a decrease in numbers at the low end. This significant shift of population is consistent with the goals for recruitment.

<table>
<thead>
<tr>
<th>SAT Score</th>
<th>1995 (Final)</th>
<th>1996 (May 11)</th>
<th>1996 (Projected Final)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>4</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>1400 - 1490</td>
<td>174</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td>1300 - 1390</td>
<td>403</td>
<td>536</td>
<td></td>
</tr>
<tr>
<td>1200 - 1290</td>
<td>84/</td>
<td>1013</td>
<td></td>
</tr>
<tr>
<td>1100 - 1190</td>
<td>1018</td>
<td>1117</td>
<td></td>
</tr>
<tr>
<td>Below 1100</td>
<td>716</td>
<td>548</td>
<td></td>
</tr>
<tr>
<td>No SAT</td>
<td>605</td>
<td>146</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>3767</td>
<td>3650</td>
<td>3700</td>
</tr>
</tbody>
</table>

RECENTERED SAT

The quality of students entering our Special Programs--College Park Scholars, University Honors and the new Gemstone/Honors Humanities programs--is outstanding. The entering class in Fall 1996 includes students in College Park Scholars with mean SAT scores of 1235 and high school GPA of 3.68; University Honors with mean SAT scores of 1343 and GPA of 3.91; and Gemstone/Honors Humanities with mean SAT scores of 1386 and GPA of 3.95. Of Fall 1996 entering freshmen, 22% will receive such merit-based scholarships. The award comparison is shown in the following table:

<table>
<thead>
<tr>
<th>Award</th>
<th>1995</th>
<th>1996 (as of May 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banneker/Key</td>
<td>71</td>
<td>154</td>
</tr>
<tr>
<td>Deans</td>
<td>36</td>
<td>119</td>
</tr>
<tr>
<td>President’s</td>
<td>513</td>
<td>515</td>
</tr>
</tbody>
</table>

AWARD COMPARISON

One goal of the recruiting strategy was to increase the number of good students who stay in Maryland at UMCP rather than leaving the state for neighboring institutions. An index of our success in the area is shown in the next table, which compares our top competition for admitted students. Simply put, students not selecting to come to Maryland are now going to better schools than in the past. Students perceive Maryland to be a peer institution with schools of a significantly higher academic reputation now than they did ten years ago.
Top 1986 Competitors | 1996 Competitors
---|---
UMBC | Penn State
Univ. Of Delaware | Virginia Tech
Rutgers | Univ. Of Michigan
Towson State | Univ. Of Virginia
Salisbury State | Univ. Of Delaware

COMPARISON FOR ADMITTED STUDENTS

And despite the obstacles created by the elimination of the Banneker Scholarships, we have continued to improve the diversity of the incoming class, especially the number of African American students, as shown in the following table:

<table>
<thead>
<tr>
<th></th>
<th>May 13, 1995</th>
<th>May 11, 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>477</td>
<td>554</td>
</tr>
<tr>
<td>Hispanic</td>
<td>177</td>
<td>178</td>
</tr>
<tr>
<td>Native American</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Asian American</td>
<td>523</td>
<td>442</td>
</tr>
<tr>
<td>Caucasian</td>
<td>2395</td>
<td>2356</td>
</tr>
</tbody>
</table>

FRESHMAN CLASS DIVERSITY COMPARISON

B. Retention

Recruitment is inextricably linked to retention: high retention rates attract prospective students, and low retention rates have the opposite effect. Similarly, the admissions office's efforts to recruit an excellent, diverse student body will have no effect if the class decays quickly. Furthermore, an admissions process which recruits and admits students appropriate to the University (and therefore likely to succeed there) will enhance the rate of retention. Because of these connections between recruitment and retention, this report considers them together.

During the summer of 1995, the campus sponsored a Continuous Quality Improvement Team on Retention (CQITR) to study our situation and report its findings. The team was formally sponsored and chartered by top-level University leadership and had cross-functional membership. The CQI team organized problems in four broad areas: campus management, financing education, campus climate, and Math preparation/success. The team took a data-driven approach, including comparisons to peer institutions.

Data showed that UMCP was at the top for first-year retention and six-year graduation when measured against comparable peers such as the University of Texas-Austin, the University of Arizona, and Ohio State University. When compared to aspirational peers such as the University of California-Berkeley, University of Minnesota, University of Michigan, UCLA, and University of North Carolina-Chapel Hill, UMCP is nearer the bottom. UMCP six-year graduation rates are in the mid-sixties while three of the aspirational peers have six-year graduation rates ranging from the mid-seventies to the mid-eighties. (Graphs are available.)
The CQITR concluded that common beliefs about retention are erroneous, especially the belief that most students who leave are in poor academic standing or did not belong here because of academic short-comings, and that, therefore, admitting better quality students will solve our retention problem. UMCP loses many high caliber students who cannot be easily replaced by transfer students. The issues associated with retention are complex; there is no single, “silver bullet” solution. The CQI team offered twenty-three recommendations to address nine problems which were identified in four broad areas. These recommendations included:

* building an infrastructure to support retention

* managing the process as a focused activity

* and changing the culture with regard to the importance of student retention.

Since the CQITR presented its report in July 1995, Dean of Undergraduate Studies Robert Hampton has appointed a Retention Action Group in the Undergraduate Studies Office to initiate action on the twenty-three specific recommendations that were made. The goal is to take action on all recommendations by August 1996.

V. The Future

The recommendations proposed in 1987-1990 to improve undergraduate education at the University of Maryland, College Park were far-reaching, and the measures taken since to enact them have remained essentially true to their spirit. The Taskforce established to assess the quality of undergraduate education for the campus’s Self-Study was truly impressed by the number and quality of the many new initiatives that have been implemented in this area. In pointing to directions that we suggest for the future, we note that these, too, are in the spirit of our recent commitments.

Most significantly, we urge the campus to hold to the commitments of the late 1980s that focused the campus’s attention more intensively on undergraduate education, and especially successfully on the first two years of the undergraduate experience. At the time, this represented a profound shift in priorities. Increased national prestige could be and would be achieved not only by excellent graduate and research programs, but also by attracting to UMCP the best and brightest undergraduate students and providing them challenging academic programs.

In the late 1980s, however, the commitment to providing excellence in undergraduate education was made when the campus's financial outlook was bright. “Flagship” status within the University of Maryland’s reorganized system had just been conferred on College Park, and the State had promised increased funding adequate to permit the campus to pursue two goals, neither in conflict with the other: to achieve the highest quality of excellence in its undergraduate programs would not require any sacrifice in the level of funding for its prestigious graduate and research programs.

Alas, the “good times” were short-lived, as was the fantasy that the competing claims between the needs of a truly excellent undergraduate program and an ambitious graduate and research agenda could be overcome by funding both at ever increasing levels. As recognized in the campus’s 1996 Strategic Plan, further improvements in any area of campus life will require the reallocation of internal resources. Competing
The 1996 Strategic plan identifies excellence in undergraduate education as the campus's number one priority. Those who are ever-skeptical, however, note that little of the Strategic Plan actually addresses the needs of undergraduate education and worry that the Plan merely pays lip service to legislative demands that the campus focus “more” on educating the State's undergraduate students. But the campus's shifting priorities toward undergraduate education occurred long before the legislature took interest in this. Attention to undergraduate education has not been forced upon an unwilling campus by the legislature (or even by campus administration). The campus faculty, acting through its elected Senate, mandated this shift in priorities. There is widespread support at College Park for providing the resources necessary for excellence in undergraduate education.

The current Self-Study has identified several areas in the undergraduate program that would benefit from increased attention:

A. For the CORE General Studies Program:

The problem in achieving the best possible General Studies program is in the competing demands of the major and graduate curriculum and the limits imposed by Maryland Higher Education Commission (MHEC) policy. Faculty repeatedly suggest one or another new requirement that would undoubtedly improve General Education: our Taskforce received suggestions for adding a speech requirement, a technology course, a foreign language, an information literacy course, an additional diversity course; but, of course, no one suggested which of the current requirements might be dropped to make room for a new requirement. Furthermore, state policy does not permit us to require more General Education courses. In other words, no additions to the CORE can be made without eliminating a current requirement. We suggest:

* that no changes to our current requirements be made without serious consideration of the ramifications; and

* that, furthermore, the campus increase its presence at State policy making bodies (such as MHEC and the K-16 Council), so that, in the future, our viewpoints carry more weight in the making of state-wide policies than was the case of the new general education requirements.

A different problem driving the demand for some changes in the CORE is the difficulty of providing enough seats to meet the mandated demand. It has been particularly difficult to provide enough seats in the Arts Distributive Studies requirement, for example, and in non-lab sciences. Hopefully, the World Courses will address high demand area here (of the first two World Courses, one fulfills the Arts requirement; and the other, a non-lab science requirement); but this situation must be monitored closely.

Adequate seats seem to be available for other Distributive Studies requirements, although not necessarily in the particular course that an individual student may desire. For example, one complaint that we heard repeatedly concerns the number of seats in Distributive Studies courses reserved for incoming freshmen, which poses access problems for upper-division students. In some cases, the requirements,
at the 100-200 level, of these students' majors precluded their completing these requirements at an earlier stage of their career. However, the Taskforce notes the overall availability of seats for almost all the required categories and the need to provide some seats for incoming students and concludes that the current system for allocating seats may be as good as can be.

The Taskforce also heard some concern about the human cultural diversity courses, and especially about the degree and the way that diversity is a part of each course. Human cultural diversity courses have proved very popular, with many students taking several, and there are demands for many more. Originally, a working group that focused only on the diversity courses was responsible for the approval and periodic review of these courses. Today, this responsibility is shared by various discipline-specific work groups whose primary responsibility is to the Distributive Studies component of CORE. The Taskforce suggests the reestablishment of an interdisciplinary group focused on all diversity courses.

There was also concern expressed about the loosening of the original Advanced Studies requirement. Not that anyone should have been surprised: Courses at the 300-400 level were to be offered in a way that was appropriate for non-majors and in two specific content areas—“Social and Ethical Problems” and “Development of Knowledge.” Even under the old General Education program (USP or University Studies Program) there had been an access problem in providing such courses, and the new CORE requirement was intended to be yet more selective. Too few faculty in too few departments were available for, or interested in, offering these courses, given the competing demands of their majors and graduate students. It is even likely that faculty who were teaching appropriate courses refused to put themselves through the cumbersome process of having their courses approved for CORE. As a result, a whole layer of useful and exciting courses is drying up.

Now that the restriction of the list of approved advanced studies courses to the two categories of Social and Ethical Problems and Development of Knowledge has been discontinued, it appears that an adequate number of seats to permit students to fulfill this requirement is available. Nonetheless, the taskforce believes that more should be done to encourage the development of advanced courses appropriate for non-majors. We must avoid becoming a campus with only two levels of courses--introductory-level courses requiring no prerequisite, with more sophisticated courses limited by prerequisites to majors.

Concerns were also expressed about the campus's progress in fulfilling the Pease Report's recommendation that more regular faculty teach CORE courses. Although the campus, in the Pease Report and numerous other public statements, has asserted the common wisdom that tenured faculty are always better teachers than less experienced teaching assistants or adjuncts, this Taskforce could not conclude that this is the case. The campus would be better served, we have concluded, by stabilizing the structure for employing lecturers and instructors and increasing their remuneration, and improving the work conditions for graduate teaching assistants. The quality of our instructors can be assured only by a long-term commitment from the University and the establishment of a non-exploitative work environment.

Overall, however, the taskforce found widespread approval for CORE. A mechanism, in the faculty review working groups, allows for modifications that
address most problems. Persistent problems have usually been traced to inadequate provision of resources. Further revising should follow only a more extensive gathering of data regarding how campus instructional dollars are spent.

This would also answer a significant question for which our Taskforce could find no answer: What is the level of financial support to undergraduate education on this campus? Has there, for example, been a shifting of resources away from graduate education toward undergraduate education? Or away from the major and professional training toward general education? Did the enhancement of the university in the late 1980s benefit undergraduate education at the level of our stated campus goals? Was undergraduate education protected during the budget cutbacks of the 1990s? Will the implementation of the current Strategic Plan, which identifies undergraduate education as the number one priority, be accompanied by a reallocation of resources from lower priority areas? The fact is that our budget mechanism does not make this information available.

B. Involving Faculty In More Undergraduate Teaching

For involving faculty in more undergraduate teaching and in efforts to improve undergraduate education:

The Taskforce has concluded that this is the most crucial factor that must be addressed if excellence in undergraduate education is to be achieved. The Taskforce heard from many faculty who continue to perceive a tension between UMCP's two goals--one to serve the nation as a major research institution, and the other to serve the state with quality undergraduate education for productive citizenship. Research and teaching are more often than not described as polarized endeavors which compete for resources within the campus.

This tension between the University's two missions is exacerbated by the existing faculty rewards structure. So long as only refereed publications are honored by tenure and promotion committees (and by salary committees), faculty will feel discouraged from increasing their contact with students or increasing the writing and experiential assignments in their courses. And yet, this is what is required for excellence in undergraduate education.

This Taskforce believes that recent campus initiatives to address this problem have been inadequate. Fifteen departmental awards for teaching excellence are clearly too few for a campus this size. Support for faculty development, while significantly increased over that offered ten years ago, is woefully insufficient still for a campus this size. One marvels, for example, at all that the Center for Teaching Excellence has accomplished, but then wonders if the 250 faculty who participated in workshops during the academic year 1994-95 is really sufficient for a campus of over 2,000 instructors. Our nationally acclaimed Curriculum Transformation Project has reached only 89 faculty. We especially need re-education of faculty on a much larger scale than attempted in any area to date, if faculty are to use new technologies in libraries and in their classrooms.

Faculty must have more support and more rewards for their attention to teaching. Tenure and promotion reviews now punish bad teachers, but do not truly reward good teachers. Few departments recognize teaching achievements in awarding
merit dollars, and this year's presidentialdirective for allocating the meager merit pool of raises was interpreted as further discouragement for such awards. That faculty might teach more courses is considered only as a punishment for the "unproductive"; the campus has yet to consider that this might be a choice that any one might contract for—perhaps for a limited period only—and that we might be well served if we honored that choice, even at the moment when merit raises are allocated.

Indeed, this Taskforce suggests that a portion of the merit pool in each department be earmarked for meritorious achievements in teaching. We also suggest that General Research Board grants for research leave be awarded to some in recognition of their contribution to teaching. We further suggest that these awards be publicized, so that all might know of the campus's commitment to rewarding good teaching. And, finally, we suggest the establishment of Distinguished Teaching Professors on a par with our current Distinguished Professors recognized for their research achievements.

The campus should consider other ways to garner prestige, prizes, awards, and funds for teaching initiatives. This, too, will be important in changing the campus climate to favor undergraduate education. Departments and colleges should be encouraged to seek these awards. The Engineering College might serve as a model for the gain that might ensue from time invested in going after one such prize: Already well-regarded for its graduate and research program, the College has now won further acclaim for its undergraduate teaching program.

Faculty, too, must be educated on the need to invest the sort of thought and energy into presenting the fruits of their teaching labors as they do in presenting their research. Preparing a teaching portfolio is not unlike writing up one's research for publication. If faculty do not take the time to tell others what they are doing in the classroom, no one can know of their work.

A goal for the coming period should be to further improve the campus cultural valuation of undergraduate teaching and education. The acts of documentation, evaluation, and presentation of teaching performance can increase the attention on undergraduate education. Discipline-specific strategies which the faculty support should be used (the simple amassing of data is not the goal). Departments' merit pay guidelines and practices should include a component for assessing and rewarding undergraduate education.

The Taskforce recognizes that the campus is being forced to increase its emphasis on teaching assessment, but urges that we turn this to our advantage. A decade ago, the difficulty of finding meaningful assessment tools presented an obstacle to teaching assessment. Now there are actually a variety of working models to follow. The American Association of Higher Education has published a listing of approaches issued by professional-disciplinary associations. Also, various actual teaching assessment programs are in place at other universities and colleges. The primary goal must be to have an assessment plan at College Park that will be a mechanism for the improvement of undergraduate education.

In the Spring of 1989 a survey of faculty, staff and students was conducted in conjunction with preparation of the report from the Subcommittee on Rewarding Undergraduate Teaching. The survey sought to measure underlying perceptions about
support for teaching. Approximately 300 students and 700 faculty/staff responded. Charts for several of the responses follow.

There are two basic questions at this time. How much have attitudes changed? How can attitudes be improved in coming years? The University should sponsor a study to answer these questions and thus further our understanding of the campus’s cultural attitudes toward teaching.

C. Goals for Undergraduate Enrollment

The taskforce recognizes that there is pressure on the campus to increase enrollment. In September 1995, the Planning Office issued a report on "Enrollment Growth Considerations," which makes clear that the era of declining enrollments has come to an end. This 1995 report examined the issue of whether UMCP should plan to maintain its current size of 21,000 undergraduates or grow in response to a projected increased number of high school graduates in the state of Maryland. The study was undertaken with several underlying assumptions:

- UMCP's long-term goal is to increase its selectivity measures: average freshman SAT, percent of freshmen in the top ten percent of high school class, and percent yield of admitted students.

- UMCP will continue to attract at least the same number of students who met UMCP's admissions standards in 1995.

- UMCP's competitive position for state resources may be strengthened if UMCP is seen as helping to serve the increase in Maryland high school graduates.

- Among transfer students, location is the major reason for attendance at a particular institution. Therefore, UMCP can only really draw the talented transfers from the immediate area, as it currently does.

The taskforce is aware of the pressure on the university to increase enrollment, but urges that the consequences of such a move be carefully considered. Of course, more students mean more tuition dollars. But the campus must recognize the possibility that the overall quality of undergraduate education could be sacrificed in a tuition-driven strategy, especially if the added students are those who require a high level of instructional support services and funding for this is not provided. Furthermore, increased enrollment could jeopardize our initiatives to further active learning if faculty-to-student ratios worsen as a result.

The taskforce also urges that the campus maintain its commitments to achieving greater diversity in its student body. UMCP's 1989 Enhancement Plan set the goal of increasing the percentage of black students in the entire undergraduate student body from 9.7% to 12%. Notwithstanding UMCP's budgetary losses after 1990, UMCP has moved steadily toward the 12% goal, and for 1996, has even set a new campus goal of 20% African American undergraduates. The taskforce applauds this.
Finally, the taskforce recognizes the challenge the campus faces in improving student retention rates. A fine report, urging attention to 23 areas, has been issued. We especially note the importance of increasing financial aid, freeing students from the necessity of working long hours off campus (or even interrupting their education) and thus enabling them to become more integrated into the intellectual life of the campus. We urge the campus to make retention an issue that captures the attention of all in the upcoming years. In implementing measures designed to improve retention, the campus takes steps that improve the quality of undergraduate education for everyone.

D. Conclusion:

The taskforce recognizes that the largeness of this institution poses both opportunities and difficulties for achieving excellence in undergraduate education. Repeatedly we heard of new initiatives that have flourished because (we believe) so many different constituencies and units have considered themselves responsible for undergraduate education. We also heard complaints of lack of coordination and communication among units. Several people even suggested that the campus is divided into too many units (some would combine Arts and Humanities with Behavioral and Social Sciences; some would have a College of Arts and Sciences). Restructuring the campus, however, may not be advisable, and indeed we may not even wish to undertake another reexamination of the structure at this time; but improved coordination and communication can be attempted by other means. The new Advisory Committee on Undergraduate Education, with representatives to be appointed by both the Senate and the Dean for Undergraduate Studies, is an important first step; but in a year's time, we urge the campus to consider if this group should be granted greater powers than envisaged at the present. It is important that the campus have the administrative structure which best assures excellence in undergraduate education.
THE EDUCATIONAL MISSION OF A PUBLIC RESEARCH UNIVERSITY:
THE MIDDLE STATES SELF-STUDY

APPENDIX E
Report of Task Force on
ACHIEVING EXCELLENCE IN GRADUATE EDUCATION

August 1996
Submitted by:

Jerald Hage, Chair
Gay Gullickson
Alice Mignerey
Tim Ng
Nancy Struna
James Wallace

THE UNIVERSITY OF MARYLAND AT COLLEGE PARK
Table of Contents for Appendix E

I. Introduction ................................................   1

II. Changes in Graduate Education: 1990-1995 .......................   1
    A. Improvements in Quality ...............................  2
    B. Increases in Diversity ...............................  4
    C. Cutbacks in Funding .................................  4

III. Analysis and Conclusion .....................................   5
    A. Specific Areas of Reflection ..........................  5
    B. Request for More Resources ...........................  8
    C. Suggestions about Process .............................  8

IV. Recommendations ...........................................   9
    A. The Problem of More Resources ........................  10
    B. The Relationship Between the Graduate School, Colleges
       and Departments ........................................  11

V. Concluding Remarks ........................................  13

VI. Appendices ...............................................  15
    E-A. Original Project Charter ............................  15
    E-B. Final Project Charter ...............................  20
    E-C. Survey to Graduate Directors .......................  23
    E-D. Resource Group Reports .............................  27
I. Introduction

A primary feature of a major public research university, in contrast to other institutions of higher learning, is the existence of a comprehensive offering of educational programs at the post-baccalaureate level. These programs transcend the undergraduate experience of educating students to be productive members of society, and instead prepare individuals to be the future scholars, educators, policy makers and leaders for the state, the nation and the world. In many ways, graduate programs are reflective of the activities and reputation of graduate faculty which participate in these programs, and high quality graduate programs are of considerable benefit to the institution. For instance, they provide an attractive recruiting environment for promising and talented faculty, and promote high visibility for the program, department, and institution in many venues. In the best of all worlds, the graduate students in these programs are valued and empowered as "developing scholars" in their field and are full participants in all activities that affect their department and their field.

Graduate programs fulfill many functions in addition to educating the future professorate, and this distinction is particularly important in a land grant institution like the University of Maryland at College Park; many states have both a liberal arts university and a land grant university, but in Maryland both of these missions are embodied in one campus. While quality high programs can in some instances be identified by reputational surveys such as the 1995 NRC Survey of Research-Doctorate Programs, it is important to remember that these surveys often have a primary focus which may not be totally consonant with the missions of graduate programs present at a land grant institution. For instance, the NRC Survey is careful to point out that it focused on "research training programs," and that it also "recognized that doctoral education has a range of purposes, and graduates follow a variety of career paths in academia, industry, and government."

II. Changes in Graduate Education: 1990-1995

Three summary comments can be made about the changes in the nature of graduate programs at the University of Maryland at College Park during the past five years. First, despite declining state resources there has been a considerable and continuing effort on the part of the institution to improve the quality of its graduate programs. Second, campus diversity goals for graduate education have continued to be pursued and maintained. Third, the various financial cutbacks of the campus may have had a number of unintended consequences for the support of graduate students.

A. Improvements in Quality

Since the 1992 interim report to the Mid-Atlantic States, many departments and colleges, as well as the university community as a whole, have been concerned about improving and maintaining the quality of their graduate programs. This has been accomplished in a variety of ways, and a number of our graduate programs now rank highly in national surveys.

Graduate programs in general have become more selective in their admissions and have placed a stronger emphasis on their doctoral programs. Total enrollments of graduate degree-seeking students in 1991 were 8226; these numbers declined to
7724 in 1995. Of this decline, master's students went from 4177 to 3781 and while the number of Ph.D. students only declined from 4049 to 3943. This period of time has also witnessed the closing of several graduate programs, and the initiation of new ones.

In the context of a series of severe and unexpected financial crises in the state of Maryland beginning in 1991 and resulting in reduced funding for the campus, a decision was made either to close departments and graduate programs felt to be of poor quality, or to combine them with other programs of higher quality. Specifically the Departments of Agricultural Extension and Education; Radio, Film and Television; Recreation; Textiles and Consumer Economics; and Industrial, Technological and Occupational Education were closed, as were their graduate programs. In addition, the Department of Human Nutrition and Food Systems was transferred to the College of Agriculture & Natural Resources and combined with graduate programs in Nutritional Sciences and Food Science to form the Department of Nutrition and Food Science.

Some of these programs were identified as low quality based upon the selectivity of their graduate admissions, which was based upon the undergraduate GPA and standardized test scores of their admitted students. Other criteria such as longevity of the program and productivity of the faculty were taken into account. In at least one situation, a department and its graduate program had been in existence for only a short period of time and could not be sustained in view of the declining resources available to the campus and the ability to offer similar educational programs in departments that were more established at UMCP.

Despite the financial crisis, a number of new graduate programs have been created in recent years. In the Social Sciences, an interdisciplinary professional master's degree program in Survey Methodology was established through a grant from the National Science Foundation. In Engineering, new Master's degree programs were started in Fire Protection Engineering and Telecommunications Science; in addition, a professional master's degree program for returning students was initiated. In the Physical Sciences, Astronomy became a department and graduate program independent of the Physics department. A joint Professional Master's Program in Software Engineering was also started in partnership with a sister campus, the University of Maryland at University College.

Nor are all new graduate programs were at the Master's or doctoral level. The School of Public Affairs initiated a certificate program in Environmental Policy, and the Sociology department received a grant from the U.S. Army to create a special training program in military sociology.

In addition to new degree programs, a considerable amount of curriculum revision has occurred within existing departments and graduate programs. The French and Italian department recently completely redesigned their M.A. graduate program. Philosophy added a cognitive science Ph.D. specialization, which allows for interdisciplinary research. The Family Studies department and the Department of Health Education have collaborated to develop a new interdisciplinary Ph.D. program. The Botany department became the Plant Biology department with an increased emphasis on the molecular biology of plants. The interdisciplinary program in Marine-Estuarine-Environmental Sciences (MEES) recently defined six formal areas
of specialization from which students may choose for graduate study.

Graduate programs are also evaluating new technologies for use in education and training. The Internet and the World Wide Web are used in a number of programs for instruction and research. The Master’s program in Survey Methodology has some instructors who are faculty at the University of Michigan yet teach courses at College Park via Compressed Bi-Directional Video and audio. The MEES program relies heavily on the University of Maryland System Instructional Video Network (IVN) to provide lectures and seminars simultaneously to students located at many sites around the state. As distance delivery technologies for education grow in speed and sophistication, we anticipate more of our graduate programs will encompass these technologies in their educational activities.

In addition, graduate programs are drawing increasingly upon the expertise of scientists and scholars at national laboratories and institutions in the Metropolitan Washington area, such as NIH, NASA Goddard, the USDA Beltsville Agricultural Research Center, and the Naval Research Laboratory. Many internationally renowned scientists from these institutions have been granted "Special" Graduate Faculty status at UMCP to allow their participation in graduate education. Also, the recent opening of the National Archives "Archives II" adjacent to the campus provides access to a number of archival documents and non-print items of enormous historical importance for a number of fields.

Last but not least, an annual campus-wide graduate teaching assistant conference was also initiated in 1993, bringing new TAs from across the campus together for a day of training and discussions with professors and experienced TAs on how to improve the learning process both in and out of the classroom.

**B. Increases in Diversity**

Along with these improvements in quality, the university has maintained its commitment to increasing the diversity of the graduate student body. Departments, colleges and the Graduate School have a wide variety of recruitment activities and funding opportunities which they use to attract a broad racial, ethnic and gender mix to the university. Several graduate programs have established mentorship programs to improve the retention rate of their minority and female graduate students.

These efforts are bearing fruit. Doctoral enrollment by subgroup has gone from 30.9 percent white American women to 33.9 percent; from 31.5 percent white American men to 31 percent; from 5.5 to 9.4 percent minority women and from 4.3 to 8.5 percent minority men during the period of fall 1989 to fall 1995. Retention and graduation rates are similarly affected; a new report by the National Research Council ranked UMCP fifth in the nation in the number of Black students earning Ph.D. degrees from 1990-94, and third among Level 1 research institutions.

**C. Cutbacks in Funding**

In ways that are still not clear and that require considerable more careful study on a department by department basis, there is the perception on campus that the funding picture has deteriorated for graduate students. However, institutional figures for
graduate assistantships indicate that the number of graduate assistants increased from 2595 in 1989 to 3003 in 1995. Concentrating on the two major categories of graduate assistantships during the period 1990-94, teaching and/or administrative assistantships increased from 1876 to 2066, and research assistantships increased from 897 to 987. Graduate School Fellowships have held steady at approximately 250.

The increase in graduate research assistantship funding can be attributable in part to the extraordinary increase in the amount of research funding, including Designated Research Initiative Funds (DRIF), that the university has received in the past five years. However, this should have generated more support for graduate students that it appears to have done. Part of the difficulty is that some faculty feel that budgeting graduate research assistants into a proposal is more costly in the long run than budgeting for a postdoctoral researcher, since students are limited in the hours that they can work and since the grant also needs to cover tuition and health benefits for the student. As yet unanswered is how much DRIF has in effect absorbed the continual cuts and rescissions made by the state in funding rather than being used to support research in the form of graduate education.

The issue of research assistantships as a prime source of funding for graduate students is not a trivial one. Many studies at the national level have shown that graduate research assistants have a distinct advantage in terms of time required to finish their degree when compared to other types of graduate funding. Teaching assistants tend to take the most time to their degree programs.

Within the bleak financial picture, some departments have still managed to considerably increase their funding for graduate students. If a 25% increase in graduate student funding is used as a bench mark for the period of 1990 through 1994, then the several departments stand out. Within Arts and Humanities, the departments of Comparative Literature, Linguistics, Music, and Women’s Studies; within Behavioral and Social Sciences, the departments of Anthropology, Geography, Government and Politics, Psychology and Sociology; within the College of Engineering, Aerospace Engineering; and within the College of Education, Child Study and Curriculum and Instruction. The College of Business also increased its overall support by a substantial amount. While some of these departments are growing from a relative small number this is not true for all. Certainly, Music, most of the departments in Behavioral and Social Sciences, Physics and Business already had large programs. Departments with significant declines include Philosophy, Chemical Engineering and Electrical Engineering.

III. Analysis and Conclusion

A. Specific Areas of Reflection

As indicated in Appendix E-A, the Steering Committee for the Mid-Atlantic States Review provided a number of critical questions for our Task Force to consider. Most of these questions require quite specific answers that vary from graduate program to graduate program, and even more so from academic college to professional college or school. To capture the spirit of these questions, the Task Force devised a set of five questions for the resource groups. Each of these questions, and the responses of the Resource Groups, are summarized below. Appendix E-B provides the original reports from the Resource Groups.
**Question 1:** What are and should be the purposes and priorities of the doctoral programs in our discipline and similar disciplines?

A considerable amount of consensus exists across the various resource groups, with several important qualifications (see Appendix E-B). In general, representatives of the various disciplines concurred that goals of the Ph.D. program focus on the production of knowledge via research and its dissemination in various settings. Commonly, Ph.D. students are expected to expand the frontiers of knowledge, both in and across disciplines, and are mentored to engage in "cutting edge" research. UMCP professors are also aware, however, that higher education is not the only arena in which discovery, analysis, and synthesis skills of Ph.D. students are valued. Consequently, while some programs concentrate on preparing researchers for academia, others do so for government and the private sector, and still others educate students for both arenas.

One qualification in the groups' discussions of the purposes and priorities of doctoral programs involved precisely what degree program represented the highest level of achievement. In some programs, the M.F.A. is considered to be the equivalent of the Ph.D.; these programs emphasize creativity. Distinctions across programs such as this one, however, do not appear to (nor need they) create many tensions for graduate education on this campus.

There is one other theme that emerged from all of the resource groups. Disciplinary representatives are committed to improving existing programs, but they need the resources to do so.

**Question 2:** What are and should be the purpose and priorities of the masters programs in your discipline and in similar disciplines?

This question elicited a sharp distinction between the objectives of the Ph.D. programs and the masters programs, whether professional or not. Here the emphasis is much more on the need to impart skills and competencies, and to continue the education beyond undergraduate college.

Many, but not all, participants thought the masters degree was designed to prepare individuals to work in industry or the government. Some saw it as a stepping stone for the Ph.D.

**Question 3:** How do and should doctoral programs and masters programs relate to one another?

This question elicited the most disagreement that in various ways reflects the diversity of the departments and the colleges and their respective missions. Some felt that the masters program should be at the same intellectual level as the Ph.D. program so that the latter is not diluted by the former when combined. Others felt that there should be quite disparate programs. Clearly, the size of the department has a considerable impact on the possibilities for having separate programs.

**Question 4:** What would be the characteristics of an outstanding graduate program in your discipline or in similar disciplines? Can you provide suggestion on how to get there?
Originally the Task Force believed that it might be important to consider the nature of the indicators that are being used to evaluate the quality of specific graduate programs. However, we met with a representative from the Graduate School who provided information on the upcoming review of graduate programs which will be conducted by the Graduate School. Since our views were consonant with that of the Graduate School, namely that each program should be evaluated on the criteria recognized and used across a program's discipline, we did not pursue that issue further.

There was consensus among the resource groups about the characteristics of outstanding graduate programs: they possess outstanding faculty and outstanding graduate students. Indeed, the groups considered the former characteristics as the single most important requirement for quality graduate education. No manner of program reorganization can adequately hide the absence of nationally and internationally recognized faculty or, in the reverse, deny the presence and accomplishments of those who both teach and do cutting edge research in a graduate program.

The consensus evaporated, however, when the resource groups considered questions related to the contemporary trend toward research and teaching specializations. In particular some resource groups acknowledged that programs face a dilemma resulting from the practice of faculty specializing in particular areas and the need to educate students broadly, so that they both receive adequate educations and obtain employment. Moreover, smaller departments have more difficulty in becoming known for a particular area of research than do larger programs. Indeed, what constitutes a specialization varies across disciplines. Finally, and related to the tensions between specialization and maintaining adequate disciplinary breadth in a program, is the question of how many faculty members are requisite for an optimal program. The answer appears to vary by discipline and even by specializations within disciplines. However, regardless of disciplinary differences, there may be a minimum number of faculty necessary for quality graduate education. In an given program, too few faculty members permit neither adequate breadth nor dynamism in some specializations.

Many of the suggestions about how to improve the quality of graduate programs repeat ideas listed in the following sections and are therefore no duplicated here.

**Question 5:** How might the Graduate School assist you in achieving the purposes and priorities of your graduate program?

A number of ideas emerged in the five resource groups that are worth considering by the Graduate School although many of these revolve around the problem of finances. The list is as follows and is divided into two general categories: requests for more resources and suggestions about process. We list all of the ideas that were generated by the resource groups but they can be summarized under these two several major themes.

**B. Request for More Resources**

1. Increase the number of fellowships, their level of funding including health
benefits and particularly the flexibility of awards.

2. Increase in particular the number of dissertation fellowships.

3. Increase the number of GRB awards for faculty members.

4. Provide tuition waivers for RAs so that departments might make more of these available from the same amount of money.

5. Reduce the application fee, which particularly impacts on foreign students from Asia.

6. Make more money available for graduate student travel to conferences and ideally for recruitment as well.

7. Provide a semester off for TAs after several semesters to allow for more work on the papers or their dissertation or conversely assign less work the first semester or year to allow for better adjustment.

C. Suggestions about Process

1. Improve communication between the department and the Graduate School during the application process.

2. Reduce the amount of paper work.

3. Sponsor a "recruitment showcase" that pulls together the best recruits, ideally with travel paid for.

4. Sponsor a graduate student appreciation day with a reception for the graduate students.

5. Organize workshops for new faculty.

6. Take the lead role in public relations and especially relative to the graduate programs.

7. Take the lead role in developing relationships with and securing funds from Graduate School alumni as a distinct group. In particular, it would be useful to establish a directory of graduate alumni and where they obtained their first jobs.

8. Facilitate the ease with which interdisciplinary programs at the graduate program level can be started. In particular, consider making available rewards for efforts in this area.

9. Facilitate the development of relationships with industrial laboratories, government laboratories, and other forums of research where internships and jobs can be obtained.

10. Identify which are the feeder institutions for particular programs and increase our efforts with these schools.
11. Develop a brochure for each of the colleges indicating the strengths and foci of particular programs within each college.

From this flows one general problem--how to obtain more financial resources for graduate students--and a general recommendation that was best verbalized by one of the resource groups: the Graduate School should take more of a leadership role, working with the various colleges, in a number of distinct areas.

IV. Recommendations

To provide coherence to this set of recommendations, we have organized them around two central themes. The first and most critical is the problem of how to generate more resources for graduate education while the second deals with the issues of the way in which the Graduate School, the colleges, and the departments can interact together more effectively.

A. The Problem of More Resources

Since our Task Force did not have either the time, resources, nor mandate to carefully explore in what ways the various reductions in state funding have directly or indirectly impacted on graduate education, our first recommendation deals with the necessity of determining in what ways funds from research grants and DRIF are being used.

We recommend that the Graduate Dean and the Deans of the various colleges study how DRIF is being allocated within departments and colleges with a view of determining whether or not further resources could be allocated to support graduate research assistantships. We suspect that in a variety of ways these research funds have been used by departments to help defray the cost of the various cuts in state support within the unintended consequence of reducing what might have otherwise been available to support graduate student funding. Given the concerns about this among everyone, a careful auditing of how funds are spent might suggest ways in which resources could be better allocated.

Given the overriding concern about the need for generating more resources to improve the doctoral program and recruit better graduate students, our next recommendation suggests a way in which this might be done. We recommend that the colleges should explore with their respective departments the possibility of providing professional masters degree programs with a view of generating more funds to enhance the Ph.D. programs. Other new programs, such as certificate programs, should also be explored. These generally do not require the commitment in time or money (or faculty supervision) as master's or doctoral programs, yet fill specific needs for post-graduate education for certain segments of the population.

The model would the kinds of programs offered by the professional schools, such as the those in the School of Public Affairs or the recent professional engineering master's degree program. These professional masters degree programs would have to be designed and clearly separated from the Ph.D. program so that the latter is not diluted by this effort. In some of the smaller departments this might not be possible. Also in this area, the college might work with several departments to develop interdisciplinary professional master's degree programs, which might be particularly
attractive for those interested in advancement in their careers.

Finally and continuing with the theme of the problem of resources, we recommend that the Dean of the Graduate School assume a leadership role in developing specific targets for alumni funds that would augment the graduate education program as is done at our peer institutions.

When universities engage in major fund raising drives, usually a considerable amount of the resources are earmarked for graduate education. In particular, if the alumni of the graduate programs as distinct from the undergraduate programs are identified and mobilized, we believe that the university will be tapping a rich resource that can provide the kind of additional support that is needed.

B. The Relationship Between the Graduate School, Colleges and Departments

Improving the delineation of the roles and responsibilities of the Graduate School with respect to the Colleges and the Departments is an over-arching goal. Clearly, the assumption of a leadership role in the generating of more graduate alumni funds for graduate education on campus would provide one way in which the interaction between the Graduate School, the colleges and the departments could be improved.

While working with the resource groups, the Task Force became convinced that resource groups are a viable mechanism that should be used more frequently to solve problems in graduate education. The Graduate Council may not reflect the true diversity of graduate education on campus, and is not structured to be an idea generator or to engage in a problem solving process. Therefore, we recommend that each time there is a major issue confronting the Graduate School that resource groups within the different colleges and the professional schools be organized to provide both information about the nature of the problem and suggestions about how to resolve it.

Our objective is to make everyone more conscious of the considerable diversity that exists in graduate education and to recognize that a single solution is unlikely to work. In many instances, there is probably a lack of information about this diversity. The idea of resource groups as distinct from committees is their relatively short duration and limited focus. A good starting point for the utilization of these resource groups is the various suggestions that were made about how the relationship the Graduate School could improve the process.

With regard to the overall process of continuing to improve our graduate programs, we found that so many of the specific suggestions involved the need for more resources, to the point that resources becomes the major stumbling block to progress. But this is not the only set of issues. Another deals with the way in which departments and colleges are evaluated for obtaining what resources there are, particular the evaluation of the quality of the various graduate degree programs.

In the 1996-97 academic year, the Graduate School plans to conduct an evaluation of all doctoral programs in the university. Among the objectives of this study will be to consider whether a re-allocation of resources among existing doctoral programs may assist those programs in reaching a "top ten" status in that discipline at
the national level. This process may also result in the closing of some of the existing doctoral programs. This may prove to be a controversial process, and our Task Force is concerned about the following: (1) the criteria by which programs will be judged; (2) the data that will be used in the review; (3) the intellectual rationale to be used if programs are closed; and (4) the impact of the review and decision-making process on the faculty and graduate students within individual programs and in the university at large.

We urge the Graduate School to keep the following points in mind during the review process:

1) The criteria by which programs are judged should be primarily intellectual and objective in nature. We understand that all graduate programs are expensive since they involve financial support for at least some of the students in the program. But we believe that the university will be weakened, not strengthened, if it makes decisions on purely economic grounds rather than on intellectual grounds.

2) Differences among fields and degree programs should be accounted for and each program should be judged by the criteria that are appropriate. For instance, the amount of time needed for research and writing of dissertations varies widely from field to field; some fields prepare students primarily for the academic world, others for fields outside of academe.

The university should determine what criteria it will use in judging programs and should not rely entirely on criteria established by external agencies and organizations.

3) The data that currently exists in official records is often false and misleading. This is particularly true with regard to the number of students in programs and the average length of time between entering and completing degrees. (No meaningful distinction is made, for instance, between full-time and part-time students in assessing progress towards degrees. Thus, students who have taken full-time employment, even in university teaching, are not distinguished from students who are working full time on their degrees.)

Every effort should be made to ensure that official institutional statistics on graduate programs are accurate and in agreement with databases across the campus. Presently, graduate programs can obtain their "official" enrollment data from either the Office of Institutional Studies (OIS) or Academic Data Systems (ADS), but the same data request to these two offices may result in different figures being reported - and sometimes both sets of figures differ from the records maintained by the graduate program itself. A process should be instituted to allow graduate programs and OIS/ADS to work back and forth on a continual basis to generate graduate program statistics that all can agree on.

4) The faculty should be consulted and kept fully informed about the review, the criteria for the review, the reasons for the review, and the process for the review. In an era of shrinking faculty salaries in relationship to the cost of living, and increasing teaching loads in many fields, the university faces the risk of losing many of its best faculty members to other institutions if professors' knowledge and expertise are not sought out and utilized during the review. The loss of faculty would undermine
the presumed goal of this review - enhancing the intellectual standing of the campus.

V. Concluding Remarks

The questions the Task Force asked of its resources groups and Directors of Graduate Studies led them to focus on individual departmental/program trends and needs, and not to address wider university issues. We believe the university as a whole deserves attention, however. Departments are unable to educate graduate students, especially Ph.D. students, well without the support of the entire academic community. The Libraries system is particularly important in this regard. For many graduate programs the libraries, particularly McKeldin, are the primary laboratories for research. No great university can exist with a weak library. Although accesses to nearby national libraries, such as the Library of Congress and the National Agriculture Library, are an advantage to the university, they cannot make up for McKeldin's sparse holdings, particularly in foreign language books and journals. The university must continue to address the problems of the library and to invest more money in it. For the foreseeable future, this will mean investing in books and other printed matter.

The reputation of the graduate faculty is a major factor in the university's ability to attract the best students, educate them, and place them in good jobs. Individual (and departmental) reputations, as well as professors' knowledge, are based upon research and publications, and these in turn are impossible to generate without adequate research support. Sparseness of such support outside the university has long been a problem in the arts and humanities, but may well become a larger problems in the sciences and engineering as well. If the university wishes to enter the highest academic circles, the Task Force recommends that it invest more in its own faculty in terms of GRB semester and summer research grants and sabbaticals with pay, or in other forms of grants to support faculty research (which at times can only take place away from campus) and to relieve those in disciplines with traditionally high teaching responsibilities.
APPENDIX E-A

MIDDLE STATES REVIEW:

TASK FORCE ON
ACHIEVING EXCELLENCE IN GRADUATE EDUCATION

ORIGINAL PROJECT CHARTER
Self-Study Team on
Achieving Excellence in Graduate Education
Project Charter
(to be finalized by the team)

Problem Statement: Over the next decade we will likely see an increase in the number and variety of graduate activities at the University. We will continue to recruit and to educate graduate students who will pursue academic careers. We need to ensure that these students receive the highest quality graduate education and are well prepared to be the teachers and scholars of the next generation. In the current market, it is also clear that many of our graduate students, including our doctoral students, do not pursue academic careers but pursue other professional careers. We must also ensure that our graduate programs respond to their educational needs and career interests. Consequently, the University must be prepared to offer graduate and continuing education across a broad range of professional activities and train graduate students for non-academic, professional careers. In all of our graduate efforts, we must endeavor to attract superior students, offer exciting and challenging curricula, and provide energetic faculty instruction and supervision.

Project Scope: The Task Force should answer the questions in light of the University’s educational mission to offer high-quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.

- What criteria should we employ to assess quality in graduate, especially doctoral, programs across the University? What steps should we undertake to ensure that quality is both achieved and maintained?

- Do we need to do more to ensure quality instruction and supervision of graduate students? If so, what are the appropriate steps that we should take? In emphasizing good teaching, we pay appropriate attention to effective classroom instruction. Do we pay equal attention to the matter of ensuring that course content reflects current research and the state of the discipline? Are current developments in research and in the discipline adequately represented and accessible in the curriculum? Do we have in place administrative and other measures operating at the department/college level to ensure that the curriculum and courses reflect current research and developments in the discipline? If not, what measures should be undertaken?
• How should we assess the need for or utility of existing or proposed graduate programs, especially doctoral programs? How should program size and content accommodate changing market demands? Is the size of our doctoral programs congruent with that of our peers? Should we encourage or discourage doctoral work by part-time students?

• What has been the placement success of recent graduates? Are we competitive in this regard with our peers? Where do we realistically expect our Ph.D. graduates to find work in the next 5, 10, 20 years? What skills do they need (teaching, business, computer training, communications) in addition to their subject concentration? Does the acquisition of these extradisciplinary skills affect their disciplinary studies, time in graduate school, and financial support while they are graduate students?

• Our graduate assistants serve both as instructors or discussion leaders for undergraduate classes and as students as well. Are the current policies for graduate assistants regarding such things as financial support, work load, and course load appropriate? Should any changes be made?

• Are there sufficient programs in place to teach graduate assistants how to teach in order to be effective lab instructors or discussion leaders? Do we need to do more? Should such teaching programs be required of all doctoral students?

• Does the traditional academic MA degree still have a place at a research university? What should be scope and size of MA/MS programs? Should they be encouraged to grow or be reduced, and under what conditions? Would the abolition of such programs have a negative or positive impact on doctoral programs in affected departments?

• What strategies should the University follow in order to recruit outstanding graduate students? What strategies can be developed to recruit outstanding international students? What progress has been made on recruitment, retention, and completion of graduate students of color and women? What weaknesses need to be addressed?

• Are we making appropriate instructional use of technologies such as computers, the Internet, and video and audio equipment for graduate instruction? What service do we provide to faculty to help them make the most effective use of such technologies? If not, what steps should be undertaken?

• How should responsibility for our graduate programs be divided between the Office of Graduate Studies and Research and the academic departments? What role, if any, does the
academic college have with regard to graduate programs?

- Over the next decade the University will likely enter into more and more continuing graduate and professional education programs in response to both public opportunities and demand. How do we maintain quality in such efforts? What is the role of regular faculty in such activities? What are the costs? Who has the responsibility for the administration and supervision of such programs?

Final Presentation Expected by: (TBA, work on this team should be completed 120 days after start)

Interim Milestones Required of Team: (The Executive Committee or Steering Committee may agree to lay out the need for interim products required of the team prior to its completion)

Project Sponsor: Daniel Fallon, Provost

Team Leader: Jerald Hage
Professor, Sociology
3127 Art-Sociology Building
Ph: x56396; e-mail: hage@bsos1.umd.edu

Team Membership: (TBA - names & titles)

Team Facilitator: (TBA - name & title)

Others Influenced by the Problem: (List individuals, offices, projects, committees, to be sought out as members of the resource group)

Guidance Team or Presentation Audience: The team should prepare its final presentation for the Self-Study Steering Committee. In undertaking its work, the Task Force, in consultation with the Executive Committee, should develop priorities for its review. The Task Force may also, in consultation with the Executive Committee, elect to pursue additional or alternative questions.
APPENDIX E-B

MIDDLE STATES REVIEW:

TASK FORCE ON
ACHIEVING EXCELLENCE IN GRADUATE EDUCATION

FINAL PROJECT CHARTER
Self-Study Team on
Achieving Excellence in Graduate Education
Project Charter

Problem Statement: Over the next decade we will likely see an increase in the number and variety of graduate activities at the University. We will continue to recruit and to educate graduate students who will pursue academic careers. We need to ensure that these students receive the highest quality graduate education and are well-prepared to be the teachers and scholars of the next generation. In the current market, it is also clear that many of our graduate students, including our doctoral students, do not pursue academic careers but pursue other professional careers. We must also ensure that our graduate programs respond to their educational needs and career interest. Consequently, the University must be prepared to offer graduate and continuing education across a broad range of professional activities and train graduate students for non-academic, professional careers. In all of our graduate efforts, we must endeavor to attract superior students, offer exciting and challenging curricula, and provide energetic faculty instruction and supervision.

Project Scope: After careful consideration of the original research questions, the Task Force has decided upon three areas of focus for our review of Graduate Education at the University of Maryland. These three foci are:

(1) The purposes and priorities of Ph.D. programs, their measures of quality and how these relate to the needs of society and students;

(2) The purposes and priorities of the Masters program - professional and otherwise and including continuing education - their measures of quality and how these relate to the needs of society and students and to the Ph.D. programs; and

(3) The responsibilities of the Office of Graduate Studies and Research and of the colleges, departments, and professional schools in graduate education, especially relative to supervision, administration, and maintenance of quality and diversity.

The Task Force feels that it is impossible to evaluate the criteria employed to measure quality without understanding the priorities of these programs and whether or not they are designed to relate to the current pattern of placements or perceived societal and student needs. The Task Force is also considering whether or not it is advisable to use the same set
of criteria across all colleges and professional schools.

Final Presentation by: May 27, 1996

Project Sponsor: Daniel Fallon, Provost

Team Leader: Jerald Hage, Department of Sociology
Art-Sociology Building, x56396, hage@bss1.umd.edu

Team Membership: Gay Gullickson, History
2127 Francis Scott Key Hall, x54299, gg17@umail.umd.edu

Alice Mignerey, Chemistry/Biochemistry
3129 Chemistry Building, x51852, 201228@umdd.umd.edu

Tim Ng, Horticulture and Landscape Architecture
Holzapfel Hall, x54245, tn5@umail.umd.edu

Nancy Struna, Department of Kinesiology
2347 HLHP Building, x52504, ns16@umail.umd.edu

Jim Wallace, Mechanical Engineering
2166 Engineering Classroom, Building, x55271, wallace@eng.umd.edu

Research Assistant: Catherine Mobley, (Research Assistant), Department of Sociology, 3147 Art-Sociology, x56419, s-cmobley@bss1.umd.edu

Team Facilitator: Jim Greenberg, Coordinator, College of Education, Center for Teaching Excellence, 2202 Benjamin Building, x53154, jg55@umail.umd.edu
APPENDIX E-C

MIDDLE STATES REVIEW:

TASK FORCE ON
ACHIEVING EXCELLENCE IN GRADUATE EDUCATION
SURVEY TO GRADUATE DIRECTORS
To: Graduate Directors  
From: Dr. Jerry Hage  
Chair, Graduate Education Task Force, Middles States Review

We would like to compile data on improvements or changes in UMCP graduate programs in the past five years in preparation for the Middle States Review, which is to occur later this year. We believe that a number of these changes have occurred, but that many people are unaware of the extent to which your Department has improved during this time period.

To this end, we would appreciate your answering the questions on the attached pages regarding your graduate program. We will use your responses in our final report to the Executive Committee and will attach them in the form of an appendix.

You may submit your responses to Catherine Mobley, Research Assistant, via e-mail, campus mail, or fax at the addresses below. If we could have a response by March 29, 1996, that would be most helpful. If you have any questions about this effort, you may contact Alice Mignerey at 405-1852 (e-mail: 201228@umdd.umd.edu).

Thank you in advance for your input.

Please respond by March 29, 1996 to:

Catherine Mobley  
Department of Sociology  
University of Maryland  
College Park, MD 20742-1315  
Phone: 405-6419/6392  
Fax: 314-6892  
e-mail: s-cmobley@bss1.umd.edu
1. For each of the past five academic years, what were the entering GRE’s and GPA’s of your graduate students? How many new students have you enrolled in each of these years? What percentage of your students have received financial support in each of these years?

2. Does your department have a process for curriculum renewal? Have you made any significant changes in your graduate program(s) during the past five years?

3. How many masters and doctoral degrees were awarded by your department each year for the past five years?
4. How do you interpret any trends in questions 1, 2, and 3?

5. As you probably are aware, the Graduate School is attempting to develop indicators of the quality of graduate programs. What do you consider to be the indicators of quality for graduate programs in your discipline?
APPENDIX E-D

MIDDLE STATES REVIEW:

TASK FORCE ON
ACHIEVING EXCELLENCE IN GRADUATE EDUCATION

RESOURCE GROUP REPORTS
Middle States Self-Study
Achieving Excellence in Graduate Education

Resource Group#1
(AGRICULTURE AND LIFE SCIENCES)

Resource Group Members:

Millard Alexander - Chemistry
Kimberly Brown - Biological Resource Engineering
Jose Costa - Agronomy
Jeff Forbes - Chemistry and Biochemistry
Ted McConnell - Agriculture and Resource Economics
Bill Magette - Biological Resource Engineering
Skip Pierce - Zoology
Carol Pontzer - Microbiology
Bob Roberson - Microbiology
Theo Solomos - Horticulture
Soichi Tanda - Zoology

Resource Group Questions:

1. What are and should be the purposes and priorities of the doctoral programs in your discipline and similar disciplines?
   a. Train basic scientists to be self-sufficient and independent directors of research (in academia, industry, and elsewhere)
   b. Expose students to real-world applications of disciplines, teaching them differences in culture and motivations between researchers in academia and industry
   c. Make students “hireable”
   d. Take advantage of, and involve, locally available research opportunities, but in so doing, avoid a “free labor” arrangement (with industry, federal labs, etc.)

2. What are and should be the purpose and priorities of the masters programs in your discipline and in similar disciplines?
   a. M.S. degrees are NOT “little” Ph.D.’s; M.S. programs should teach competencies, impart basic knowledge, transfer an understanding of technology, but NOT prepare research directors
   b. Serve students who don’t want the responsibility of research leadership made possible by Ph.D. degrees
   c. Help students who do not have a firm direction of where they want to go with their lives after receiving a B.S.; help them decide what they want to do
d. Serve as a stepping stone for further advanced degrees

e. Prepare students for Ph.D. by promoting opportunities to work in industry

f. Expand student’s capacity to think, analyze and reason

g. Prepare students for mid-level managerial jobs outside academia

h. Basically perform a service function for students

3. How do and should doctoral programs and masters programs relate to one another?

a. Doctoral programs must be the higher priority; most of the resources for graduate programs should be devoted to doctoral programs (campus-wide and in departments)

b. While M.S. programs serve to prepare students for pursuing Ph.D.’s, the two degrees should be obtained at different institutions

4a. What would be the characteristics of an outstanding graduate program in your discipline or similar disciplines?

a. A stimulating environment that attracts and retains faculty rather than prompts them to leave

b. A critical mass of faculty (and students)

c. Ample resources -- money, human capital, infrastructure

d. The “usual” measures of student quality: high GRE scores, multiple admission offers from prestigious institutions, papers published, etc.

e. The “usual” measures of faculty quality. High international reputation, citations, publications, recognitions, grants, etc.

f. A high degree of graduate student mentoring by faculty

g. Ratings by external groups with accepted levels of quality

h. Types of jobs held by graduates

1. Immediately after graduation for some disciplines

2. 10 years post graduation for some disciplines rank of job (research leadership positions) number of jobs at prestigious institutions, companies

4b. Can you provide suggestions on how to get there?
a. Employ and retain the highest quality faculty  
   Offer the most competitive salaries  
   Create the most stimulating academic environment

b. Involve graduate students fully in upper level undergraduate teaching

c. Attract the highest quality graduate students  
   Offer the most competitive assistantships  
   Create the most stimulating academic environment

d. Improve the facilities and appearance of the surroundings to make a better impression on visitors and prospective students. The grounds look fine but entrances to certain departments (e.g. Chemistry) are often a step backward.

e. Reserve facilities for beginning graduate students before they arrive. Some programs have no space for students and they sit in empty classrooms or hallways during breaks, etc. until they are attached to a lab or lucky enough to find space.

f. Encourage faculty participation in graduate activities, seminars. At the department level this provides an obvious boost in the students’ perception of faculty support, interest and involvement; such involvement should raise the quality of scientific discussions and educational significance.

g. Resource enhancement - Many/most of the proposals rely on additional funding. It seems inescapable that solutions/improvements will involve increasing the funds available for devoting to graduate programs.

1. Devise a new scheme for using overhead. Overhead is generated by grants funding faculty research benefitting graduate programs. While recognizing costs of the research, the Graduate School’s allotment from these funds should be enhanced. Whereas negotiated overhead may be connected to the costs covered by the state, the graduate programs should not be squeezed from both sides.

2. Improve public relations to the point that the state legislature recognizes the value of the Graduate Program and is willing to invest in that program. (See under 51 below). The economic impact of a good University on the state including the perception of visiting industrial representatives should be salable. At a state University, a good graduate program usually will be coupled with a good undergraduate program, and is required for an exciting undergraduate program.

5. How might the Graduate School assist you in achieving the purposes and priorities of your graduate program?
a. Direct enhanced base (long-term, reliable) financial support to graduate programs

b. Provide a realistic pool of support funds and make available on a competitive basis (GRB awards are pitifully inadequate at present)

c. Make larger amounts of travel money available for graduate students to attend professional meetings and do not restrict to one award

d. Elevate graduate stipends to competitive levels, especially recognizing the high cost of living of the DC area

e. Eliminate bean-counting exercises that:

Detract faculty attention from running quality programs
Diminish faculty morale
Add to faculty frustration
Serve no purpose for program improvement

f. Assist in recruitment - The Graduate school could sponsor a “Recruitment Showcase,” bringing together selected, top candidates chosen by campus departments, at which the recruits can be enlightened about the quality of the University, can meet other potential graduate students, and can sense the appreciation the University has for its graduate students. If unable to fund travel by the students to this event completely, at least a significant amount of the expenses should be covered. This “showcase” would be coupled with the departments’ coordinated recruitment efforts. Minority student recruitment could also be incorporated into the main program as well as receive special additional attention. Housing information should also be available, perhaps organized by departmental GSA’s.

g. The GSA and GRID Day activities are good. During the year the graduate school should sponsor a “Graduate Student Appreciation Day,” perhaps a reception, encouraging the students by special recognition. It would be good for morale, healthy for University perception, and group identity.

h. A special recognition by the Graduate School is needed not only for the incoming graduate students, but also new faculty members. Because this is currently left to the individual departments, there are huge differences in the information received. At the very least the Graduate School might organize workshops twice a year for new faculty so they are aware of the opportunities for faculty that are available on campus.

i. Have more money available for graduate travel to national meetings for presenting research results, hear about the current research of others.

j. The Graduate School is able to have tuition waived for those who gain
fellowship support from external sources. Because fringes are borne by the PI’s of grants with RA support, could it not be possible to make granting RA’s less difficult by granting tuition waivers to RA’s?

k. As an added incentive for TA’s after teaching for several semesters, graduate students should receive some time off. Perhaps, half time off after three semesters of teaching. This would permit them to make strides in their research that is critical to obtaining their degrees.

l. The Graduate School should have a lead role in public relations within and outside of the state. Particularly in this state this is important because publicity is so closely connected to funding. The Graduate School is in the best position to appreciate the strong points of the Graduate Program and should be able to present the program in the best light. If we do not generate enthusiasm and recognition of our excellence it will be difficult for the state to perceive without help. There is much noise today. Unless we toot our own horn, we will not be heard.

6. What type of ongoing program assessment would enable you to document your program’s progress?

a. Assessment is best done at departmental level, but must address an inherent conflict of interest (evaluators are also the evaluatees)

b. Many data collected at campus level appear inaccurate and unusable (the summary of graduate faculty and enrollment data provided for the meeting being a typical example)

c. Alumni programs might help track and report alumni job status, type and level of job, etc.
Middle States Self-Study
Achieving Excellence in Graduate Education

Resource Group #2
(ENGINEERING & CMPS)

Resource Group Members:
Bilal Ayyub - Civil Engineering
Peter Bernard - Mechanical Engineering
Kim Choi - Chemical Engineering
Jim Earl - Astronomy
Rick Ellis - Physics
Howard Elman - Computer Science
Bill Goldman - Mathematics
Alessandra Iozzi - Mathematics
Samir Khuller - Computer Science
John Melngailis - Electrical Engineering
Fred Mowrer - Fire Protection Engineering
Gary Pertmer - Material and Nuclear Engineering
Dale Vanderwall - Education/Student Affairs
Mike Wang - Mechanical Engineering

Resource Group Questions:

1. What are and should be the purposes and priorities of doctoral programs in your discipline and in similar disciplines?

The graduate programs at UMCP share a similar overall purpose: achieving excellence by training students to compete at the absolute highest levels in their disciplines. By training students to be top researchers and teachers, students can be competitive at the top ranks of the profession. In this way, UMCP graduates can have an impact on the profession and disciplines.

In looking at the purposes and priorities of any graduate program (doctoral or masters) it is important to consider the distinction between achieving excellence in academia and achieving excellence in applied settings. While all graduate programs share the overarching goal of achieving excellence in graduate education, the priorities and emphasis placed on academic vs. applied settings will vary across departments.

2. What are and should be the purposes and priorities of masters programs in your discipline and in similar disciplines?

The answer to this question is similar to that for question #1: a primary purpose of masters programs is to achieve excellence in graduate student training.

The masters degree is a more professional degree to train people to work in applied settings. In some cases, the masters degree could be considered as a “consolation prize” or a means by which some students can make a “graceful exit” from a graduate program.
A masters degree could also be viewed as an extension of undergraduate education. Some disciplines are very broad at the undergraduate level. This broad education, combined with the reduction in the number of credit hours required for a bachelors in some programs, prevents students from specializing in particular areas. This more specialized education is thus reserved for the masters programs.

3. How do and should doctoral programs and masters programs relate to one another?

In regard to the relationship between the two programs, the basic purpose of a masters program (the thesis option) is that it should serve as a qualifier for the Ph.D. program. There was some disagreement on this point, with some individuals recognizing that the MS is not only a research degree.

It is recognized that for some applied disciplines (e.g., Computer Science) there are more employment opportunities for people at the Master’s level than at the Doctoral level. Those jobs are different than those typically obtained with a doctorate in that they are less oriented toward research, but they represent a valid career path for people seeking an advanced degree.

4. What would be the characteristics of an outstanding graduate program in your discipline or in similar disciplines? Can you provide suggestions on how to get there?

The most obvious characteristics of an outstanding graduate program are in high quality faculty and high quality graduate students. More specifically faculty should receive competitive salaries and first-year graduate students should not be burdened with a TA or similar duties.

However, it should also be recognized that a TA could provide good experience to graduate students, especially for those who are trying to decide between an MS and an Ph.D. It gives them some exposure to teaching and the academic world, and helps them decide what they want to do later on. A TA is especially useful for those students who are interested in an academic job. Thus, TA’s or RA’s can be quite useful to graduate students if the time dedicated to such duties is not overwhelming.

High quality graduate programs also provide hands-on practical training to students. This is enhanced by appropriate and adequate facilities and equipment. It is also important that graduate students are not overloaded during their first year of study. The best graduate programs in the various disciplines attempt to lighten the load on their first year students by offering full-time fellowships.

In the short-term, student publications, attendance at conferences, etc. are some measures of quality in graduate education. In the long-term, contribution to the discipline and ability to bring recognition to the UMCP graduate program are essential.

There are several steps that could be taken to recruit high quality graduate
students and ensure high quality graduate programs:

a. High quality faculty are integral to improving graduate education at UMCP. Good faculty are capable of attracting and generating resources for departments. It is important to have faculty salaries that are competitive with peer institutions.

b. Ensure that departments have up-to-date facilities and equipment. Some departments have had difficulty recruiting students because of the lack of adequate facilities and equipment.

c. Improve Alumni Relations: Alumni are an important source of mentoring for graduate students and donations for graduate programs.

d. Improve the appearance of and amenities offered by the city of College Park. One of the difficulties in recruiting top-notch graduate students to UMCP is the fact that it is difficult to “sell” College Park as a “college community.” By improving the relationship between the university and the local community, UMCP would be enhancing its chances of recruiting good graduate students.

e. Recruit good foreign graduate students.

f. Having funds available to recruit top graduate students, as is done at many of UMCP peer institutions.

In attempting to achieve excellence in graduate education at UMCP, it is important to recognize that there are some factors beyond the control of the university, which may affect student placement after graduation, most notably a poor job market for graduates.

5. How might the Graduate School assist you in achieving the purposes and priorities of your graduate programs?

Some key ways by which the Graduate School could assist are:

a. Provide more flexibility in fellowships, in terms of the amount of money offered and in regard to the deadline for fellowships.

b. Offer more campus wide traineeships and increase the stipends of fellowships and assistantships.

c. Assist departments in their efforts to strengthen Alumni Relations. The Graduate School is already seeking to enhance the connection with industry. These efforts could also be applied to strengthening ties with alumni.

d. Ease the process for pursuing multidisciplinary research.

e. Reduce the application fee. The recent increase in the application fee has deterred some qualified students from applying to UMCP. In the
past, some departments have been willing to pick up the tab for the application fee. But this practice is becoming less common. This is an important point, because many departments missing the opportunity to even review applications of outstanding students due to the cost of application (Chinese and Indian students seem to be the most affected by the increased application fee).

f. Provide better benefits for fellowship recipients. Currently, fellowships do not include health insurance. As a result, many departments will supplement a fellowship with a 10-hour RA, so the student will have benefits. In the end, this added work may defeat the purpose of the fellowship, and in the end, affect the quality of graduate education.

g. Publicize the availability of travel funds for graduate students to attend conferences and allocate more funds for this purpose.

h. Attempt to create stronger links to industrial lab companies as a source of graduate internships and jobs.

6. What type of ongoing program assessment would enable you to document your program’s progress?

It is important to monitor the input, process, and output of graduate programs at UMCP. In terms of input, the traditional measures of GRE’s and GPA’s are still important to consider. In terms of output, the employment of recent graduates (whether in academia or in applied settings) is seen to be a key measure. It is more difficult, however, to measure the “process” of graduate education. One possible measure of progress toward goals is to look at the pass rate on preliminary exams.

While program assessment is an important part of any graduate program, the participants also recognized that any good self-evaluation requires resources—in terms of time, money, and personnel. Departments should be given the time to become comfortable with and skilled in monitoring departmental progress and achievements.
Resource Group Members:
Charles Dotson - Kinesiology
Norman B. Epstein - Family Studies
Rachel A. Grant - Curriculum and Instruction
Gregory R. Hancock - Educational Measurement, Statistics and Evaluation
Leigh A. Leslie - Family Studies
Melvin R. Levin - Urban Studies and Planning
Natalie A. Schoch - Library and Information Sciences
Claude E. Walston - Library and Information Sciences

Resource Group Questions:

1. What are and should be the purposes and priorities of the doctoral programs in your discipline and in similar disciplines?

As a Research I university, our purposes and priorities for a doctoral program should center around knowledge advancement. Knowledge advancement may be divided into two facets: advancement of the total knowledge in one’s domain (i.e., research), and advancement of the knowledge of individuals pursuing studies in said domain (i.e., teaching/dissemination). These two facets will be considered below.

With respect to the first facet, students pursue a doctorate in large part to be able to generate knowledge. Some graduates will go on to academic positions where research in their domain is essential for success; others may go on to positions in government, industry, or the private sector. The ability to generate knowledge is just as crucial for those graduates pursuing the second course; in fact, it could be argued that within their domain of employment the ability to generate knowledge is their primary function. In either case, as graduate students grow in their subject matter competence, faculty must model, involve, and mentor students in the research process, preparing them to be able to tackle a variety of theoretical, applied, and socially relevant problems within their future domain. While helping students to develop research skills, faculty must provide sufficiently varied experiences to create students who are flexible; at the same time students must get sufficient focus to be able to leave their program with a viable research agenda of their own. To strike this delicate balance most effectively faculty must be providing knowledge to the students that is both current and broad in base, as well as at the forefront of their field in areas of research focus. In addition, faculty in many domains must mentor students in processes for obtaining research resources; grants and funding may be critical for graduates going on to both academic and nonacademic positions.

The second facet, that of knowledge dissemination, is also an important component of a doctoral education. Graduates should develop skills to communicate subject matter through experiences in classroom teaching as well as conference presentation. In addition, in many fields dissemination skills may be developed through interactions with practitioners: participating in colloquia and conducting in-service workshops.
serve the twin purposes of refining students’ presentation skills and keeping students in touch with those individuals practicing in their fields. As with research, faculty should attempt to provide students with a broad range of dissemination experiences, thus contributing to the versatility of its program’s graduates.

As a summary point, each field of graduate study is continually evolving. A goal of doctoral level educators should be to produce individuals who are able to transfer the skills they have acquired and to evolve along with their domain of study or employment. Graduates must not remain static; they must be committed to life-long learning within their domains, creating new knowledge as well as incorporating the continued stream of new knowledge into making intelligent decisions within their domain.

2. What are and should be the purposes and priorities of the masters programs in your discipline and in similar disciplines?

While research is often a part of a masters degree program, masters degrees remain largely professional degrees with relatively few graduates going on to pursue doctorates. For those going on to doctoral level study, masters programs may be tailored to include a thesis option and other preparatory experiences. For the large remainder of students, masters programs should focus on the skills necessary to create highly successful professionals. Fundamental to the development of successful professionals is the acquisition of a sound understanding of the foundations of a field study. Topics are generally not as specialized as in doctoral study, and tend to take more of an applied focus. Nonetheless, masters educators should take care not to present information as a mere “bag of tricks” or “survival kit” for students’ future professional careers; enough theory must be presented so as to develop individuals who are capable of learning and adapting within their professional settings. As professionals, graduates will need the ability to consume knowledge within their area of practice, staying abreast of current practice in their field and adapting such ideas within their professional setting. This requires the skills to seek out information as needed from the appropriate professional resources (e.g., library, journals, Internet).

Graduates must be able to continue the learning process, both through additional instruction as well as their own, to remain successful in their professions. Finally, because a large part of their future careers may involve interfacing with professional organizations, students should learn to communicate information clearly to their professional colleagues as well as to broader audiences of decision makers. Their graduate education should therefore include presentation experiences, both in classroom and professional settings, to facilitate the development of these communication skills.

3. How do and should doctoral programs and masters programs relate to one another?

In general, masters degree programs and doctoral degree programs serve different ultimate purposes: except for a select few who plan to pursue subsequent doctoral level study, the former tends to be of a more applied nature; the latter tends to focus more on the knowledge generation process. Different purposes notwithstanding, as presented above there a number of similarities in skills necessary to achieve those different outcomes: firm subject matter grounding, the ability to communicate subject
matter knowledge, a commitment to continued learning within one’s domain or profession. In addition, a graduate program at one level can benefit from the existence of one at the other. For example, skills acquired within a masters program are often required to be able to seek a doctoral degree; the extent to which one produces strong masters graduates will obviously influence the quality of the students going on to pursue the doctoral degree. Similarly, a doctoral program can also have a direct effect on the quality of a masters program. First, funds acquired from external sources for doctoral level research projects can enrich a department as a whole, yielding benefits in research and professional opportunities for students at the masters level as well. Second, a strong doctoral program may draw quality students to masters level study in hopes of preparing themselves well for the higher degree. Finally, significant knowledge advancements generated through doctoral level research can ultimately influence the content of the masters level curriculum.

4. What would be the characteristics of an outstanding graduate program in your discipline or in similar disciplines? Can you provide suggestions on how to get there?

The “ends” of quality graduate programs have been outlined in responses to previous questions; the means to those quality programs will be the subject of this response.

First and foremost, the university needs faculty who are strong researchers, as well as faculty who are excellent teachers and active in professional and other service organizations. Only when our faculty are able to model and mentor the qualities desired in our graduates will our students be able to practice what we preach. Of course, even the highest quality faculty cannot function in a vacuum; the graduate environment cannot be one without resources. Essential resources include high quality graduate library and computer facilities as well as the much needed support personnel for those facilities, in many cases both at the university and college levels. In addition, as both research and teaching skills are greatly valued in our graduates, support should be available for graduate research and teaching assistantships. The availability of such assistantships would specifically allow more doctoral students to be on campus full-time; in the experience of this committee such immersion in the academic setting leads to the strongest of doctoral graduates. Further, support should also take the form of internal grants for faculty and student research collaborations, and should extend to the provision of funds for graduate students to attend professional meetings. If we want our graduates to be competent professionals, we must not only mentor them in developing research suitable for conferences presentation and publication, but we must also be prepared to assist in providing the financial means to do so. Along these lines the university should also be more supportive of faculty/student endeavors which directly interface with applied settings; the opportunity to work on projects in communities, schools, or industrial settings, for example, facilitates the professional development of all graduate students and serves to foster better relations between those in the academic settings and those in the professional trenches.

Another important though less tangible element to a successful graduate experience is a positive graduate culture. It should be a priority of the university and its departments to promote a strong sense of graduate student community. The provision of departmental as well as interdepartmental facilities for graduate students to interact with each other, as well as with faculty, would foster stronger social and professional
networks. It would also serve to draw the large contingent of part-time graduate students into that network, making them feel more a part of the university graduate community. An excellent example of this exists at one of our peer institutions, the University of Michigan’s Rackham Graduate School building.

While all of the aforementioned elements are not possible without increased allocation of financial resources, the university can certainly help the faculty help themselves in this regard by taking a more active role in securing outside funding. Specifically, university assistance to faculty and doctoral students in identifying funding sources and writing grant proposals would allow graduate programs to generate some of the resources needed to enrich opportunities for students at all levels. Such grant assistance facilities are available at some of our peer institutions such as the Ohio State University.

5. How might the Graduate School assist you in achieving the purposes and priorities of your graduate programs?

In the previous question, a number of factors were detailed that would significantly enhance departments’ ability to provide high quality graduate education. Which of these fall under the specific control of the Graduate School is not completely clear given the largely administrative nature of Graduate School interactions with faculty. It would be our general hope that the Graduate School assume a stronger leadership role within the university, as is the case at many of our peer institutions. Until such time, the Graduate School can certainly act in a strong promotional capacity. By promotional we mean they should promote interactions with and among faculty on decisions affecting their graduate programs, such as funding, policy, and university infrastructure. The Graduate School should also promote and recognize the importance of quality instruction and quality professional service among faculty and graduate student instructors and researchers. There is generally much more talk about the importance of quality than there is motivation and reward for its existence. A strong Graduate School could even have the power to effect change in tenure and promotion requirements to reflect this more diverse value system.

Other promotional capacities exist for the Graduate School as well. For example, it could promote stronger ties with UMCP graduate school alumni, with particular attention to continued fund raising opportunities. The Graduate School could also promote the establishment of a UMCP press for university publications, a particular area ripe for exploration and leadership is that of electronic publishing. By drawing national attention to publications emanating from UMCP scholars, the profile of our university’s faculty and its graduate programs stands to be greatly enhanced. Finally, the Graduate School should be promoting our graduate programs widely and forcefully, allowing us to attract the highest quality students from a broad spectrum of national, cultural, and ethnic backgrounds. This includes appealing to the strongest of our own undergraduate students. In order for UMCP to attract and retain promising graduate students, scholarships, internships, assistantships, and fellowships must not only be available, but must be competitive with those being offered by peer institutions. By drawing students of the highest caliber to UMCP graduate programs, and then having the resources to maximize their growth potential within those programs, UMCP can establish itself as one of the leading institutions in the nation for graduate study.
6. What type of ongoing program assessment would enable you to document your program’s progress?

The goals set forth in our responses for improving graduate education at UMCP are attainable. There are a number of peer institutions such as the University of Michigan and the Ohio State University that have already realized these goals and are, as a result, among the nation’s top institutions for graduate study. The key is striving toward those goals for UMCP, and for assessing our progress along the way, is to scrutinize our peer institutions’ successes. Using them as a template, the University, the Graduate School, and individual departments can construct specific annual timetables for moving toward and perhaps even beyond the high quality graduate education being offered at other institutions. By tracking our programs’ graduates following completion of their degrees, and by using feedback from advisory boards of field professionals and colleagues at peer institutions (as is currently the practice across much of the UMCP campus), our progress toward the highest quality graduate education can be continually monitored.
Resource Group Members:
Larry Ausabel - Economics
Ollie Johnson - Government and Politics
Harry Kelejian - Economics
Patricio Korzeniewicz - Sociology
Joe Lengermann - Sociology
Drew Lyon - Economics
Arvind Panagariya - Economics
Dana Plude - Psychology
Sally Simpson - Criminal Justice and Criminology
Karol Soltan - Government and Politics

Resource Group Questions:

1. What are and should be the purposes and priorities of the doctoral programs in your discipline and in similar disciplines?
   a. To learn the basic knowledge of the discipline
   b. To conduct scholarly research in area
   c. To prepare students to pursue academic careers, other professional careers, to do general research in their respective areas, and to influence corresponding policy by their work.
   d. To educate students as to the interdisciplinary nature of many societal issues.

2. What are and should be the purposes and priorities of the masters programs in your discipline and in similar disciplines?

   For many Departments, the master’s degree is a preliminary step to the Ph.D. For other Departments, it is a terminal degree which is sought after in and of itself. Specific to the Department, the master degree signifies a certain level of achievement. As such, it could be important in the search for a position in the job market.

3. How do and should the doctoral programs and masters programs relate to one another?

   The members of the Resource Group had various views relating to this question. Their views are summarized in outline form below. It will become evident that some of these views are contradictory.

   3.1 Should masters programs be separate from Ph.D. programs?
- Some fields have no separate programs; in some fields, the masters is a terminal degree.

- Some fields have separate programs, but requirements for admittance are the same and/or acceptance dependent on continuing for Ph.D. study.

- Some fields are experiencing pressure to have a separate masters program which is more applied, such as CCJS and sociology

- Application materials should accurately state which degrees are actually offered

3.2 Pressure towards professional masters degree:

- Coming from students who want a degree for administrative positions (particularly government workers in D.C.)

- Coming from university as an income generator

- Is this a departmental decision?

3.3 Resistance to a professional masters degree:

- Faculty are concerned with diluting students (mixing Ph.D. with terminal masters students in classes could reduce the level of learning).

- Takes resources away from Ph.D. programs.

4. What would be the characteristics of an outstanding graduate program in your discipline or in similar disciplines? Can you provide suggestions on how to get there?

Characteristics:

- Great Faculty
- Great Students
- Wide and deep course selections

Mechanisms:

Faculty Development

- Recruit/hire the best faculty

- Reduce paperwork, committees, focus groups, etc., that take time away from students and research
- Allow junior faculty to develop. Have mechanisms within the department to achieve this.
- Summer fellowships. Encourage all faculty members to improve.
- Need a mechanism to recognize/reward faculty for formal and informal contact with students.
  - Some faculty very active on committees others very much not
  - “Reward” faculty for chairing thesis/dissertation committees
  - Is this a departmental or university-wide issue?
- Build on strengths
- Up-to-date courses
- Good breadth of classes
- Reduce size of classes. Student/teacher ratios in social sciences are some of the highest. BSOS is the workhorse of the university.
- Reduce number of incoming cohort of graduate students? This is occurring partially due to funding, but also to improve the quality of the students.

Attract best students
- Work on improving placement of students.
- Keep better track of where students are being placed.
- One problem is getting rid of students who are not good students.

5. How might the Graduate School assist you in achieving the purposes and priorities of your graduate program?

Increase Graduate Student Funding
- Students particularly need more dissertation funding
- Need additional money, not just redistribution
- Flexibility in use of money
- Decentralize distribution of fellowships. Can be better decided within departments.

Feedback on proposals and fellows nominated
(Also see responses to other questions, particularly number 4.)

6. What type of ongoing program assessment would enable you to document your
program’s progress?

- Tracking placement of students and where they are
- Ratings (external) of program, publications and citations
- Need a better understanding of why students fail to complete their program (particularly Ph.D.’s and minorities)
- Periodic review of gender and ethnic diversity
- Documentation of grant awards, correcting for differential access across fields
- Emphasize quality over quantity of (of publications, grants, etc.). Need to work on assessment of quality, based on discipline specific concerns
Middle States Self-Study
Achieving Excellence in Graduate Education

Resource Group #5
(ARTS & HUMANITIES)

Resource Group Questions:
Peter Beicken - Germanic Studies
Deborah Cai - Speech Communication
Charles Caramello - English
John Caughey - American Studies
Ed Fink - Speech Communication
Elke Frederiksen - Germanic Studies
Patti Gillespie - Theatre
David Grimsted - History
Madeleine Hage - French & Italian
Celeste Kinginger - French & Italian
Judith Lichtenberg - Philosophy
Bob Wright - History

Resource Group Questions

1. What are and should be the purposes and priorities of doctoral and M.F.A.* programs in your discipline and in similar disciplines?*

Graduate study in the Arts and Humanities prepares students for career opportunities in both academic and non-academic settings (e.g., in historical libraries, in theatre for advanced stage design, at publishing houses as editors or translators, and in government agencies, as researchers and administrators.) Our doctoral and M.F.A. programs produce people capable of contributing to scholarly discourse, teaching, and aesthetic development of the arts, as writers, teachers, and (in the case of MFA degrees) artists. Doctoral and MFA programs focus on the production of knowledge that can be used by those working outside academia in local and regional communities--and increasingly in national and international communities; they focus as well on the dissemination of that knowledge to various publics--academic specialists, students, general audiences.

Many doctoral programs are expanding to incorporate a national and international focus and to emphasize interdisciplinary study. As a result, many departments

(*In the past, the M.F.A. has been placed in the same category as other masters programs. Because the M.F.A. represents the highest degree earned in the arts, we have grouped it here with the doctoral programs of study.)
Encourage their students to take courses outside of their home departments. While many departments, especially smaller ones, are concerned with enrollments, they nonetheless want to encourage such developments. There is a tension, however, between the desire to pursue interdisciplinary connections and to have our students take course work outside our own department, and the need to maintain a strong FTE ratio within the department.

2. What are and should be the purposes and priorities of masters programs in your discipline and in similar disciplines?

Because the Ph.D. is a professional degree, more agreement exists regarding the purposes and priorities of Ph.D. programs than concerning the purposes and priorities of masters programs. Students who pursue graduate study, for example, differ widely in their goals. Some seek to complete a master’s program as a qualifier for the Ph.D. or the M.F.A.; others pursue a master’s degree as a terminal degree. Many masters, as well as M.F.A. programs, respond to the job market by offering professional programs of study. Such programs also can be considered part of the mandate of a state institution to serve its citizens. Secondary school teachers, librarians, faculty in non-research oriented colleges and universities, museum staff, artists in the state, and other professionals can benefit from Arts and Humanities master’s programs. Citizens interested in personal growth through the study of arts and humanities can also be served. These professional programs generate more revenue for the university.

The interdisciplinary focus has as much importance at the master’s level of study than it does at the doctoral level.

3. How do and should doctoral programs and masters programs relate to one another?

Masters programs should give students a sufficient introduction to the field to ready them for Ph.D. or M.F.A. study or should prepare them for professional work in secondary teaching or equivalent careers. Some departments need to offer differing programs for these two types of students; others do not. Whatever the case, the intellectual rigor should be the same for those students who will continue their graduate studies at the Ph.D. level and for those who obtain a terminal master’s degree.

4. What would be the characteristics of an outstanding graduate program in your discipline or in similar disciplines? Can you provide suggestions on how to get there?

This question can best be addressed by focusing on three aspects of graduate programs: recruitment of outstanding students and outstanding faculty; curriculum and resource development; and professional development and placement.

Ways to attract outstanding graduate students include offering more attractive financial incentive packages and improving efforts at public relations.

Strengthening the curriculum and reputation of departments often requires careful focusing of efforts in some areas of expertise; for other programs, however, the department’s goal is to provide a foundation from which specialization may be sought.
from other parts of the university. Some departments face a dilemma concerning whether to focus on offering broader programs of study or to focus on particular specialization areas. Although in some disciplines emphases on specialization seem to distinguish top-ranked programs from mediocre ones, such is not the case in all disciplines. Offering such specialized programs often requires additional resources in terms of faculty and money. In general, smaller programs find it more difficult to pursue disciplinary specialization than do larger ones.

Excellence in terms of placement may be determined by a department’s/program’s job placement record and by the success of its students in terms of publishing research and participation in professional activities.

In summary, outstanding graduate programs in the Arts and Humanities have the following attributes:

a. Faculty who are acknowledged experts in their fields, as indicated by their publication record, their record as officers in their scholarly associations and as editors in their field’s journals;

b. Faculty who are involved in mentoring relationships with students;

c. Opportunities for student support, such as fellowships and assistantships;

d. Students who participate in the meetings of scholarly associations and publish in journals in their field;

e. A significant number of doctoral students who become faculty members at colleges and universities;

f. Students who organize and participate in conferences, workshops, and publications;

g. A combination of breadth and specialization that is appropriate to the discipline and its situation;

h. Availability of scholarly resources (e.g., libraries and archives) and availability of visiting scholars and opportunities for intellectual exchanges.

5. How might the Graduate School assist you in achieving the purposes and priorities of your graduate programs?

Discussions regarding how the Graduate School could assist graduate programs must be set in a context of limited resources. It takes money to recruit high quality students: money for the recruiting activities themselves, as well as for providing competitive stipends for the students. It takes money to provide such amenities as student office space, office supplies, lounges, and computers.

Specifically, the Graduate School could help Arts and Humanities graduate programs achieve their purposes and priorities in several ways:
a. Provide funds and expertise in marketing research to improve recruitment of students. Develop a brochure to publicize the strengths and successes of various departments of the Arts and Humanities.

b. Provide the institutional structures to facilitate and reward interdisciplinary study.

c. Supply more reliable data regarding the subsequent careers of graduates.

6. What type of on-going program assessment would enable you to document your program’s progress?

While we acknowledge the importance of outside rankings of graduate programs (e.g., NRC rankings), it is important for departments to develop their own set of criteria for excellence and success.

Some important quality indicators regarding recruitment of graduate students include GREs, GPAs and quality of undergraduate institution. Quality indicators regarding curriculum include a department’s “intellectual context” (e.g., research colloquia and guest speakers); amount and duration of mentoring of graduate students; scholarly activity (e.g., publications and board participation); currency and comprehensiveness of material covered in courses; timely progression through degree programs.

Quality indicators regarding placement include the number of faculty appointments that graduates receive; quality of universities where graduates are placed; quality of non-academic positions offered to graduates; long-range measurement of graduates jobs and scholarly contributions.
THE EDUCATIONAL MISSION OF A PUBLIC
RESEARCH UNIVERSITY:
THE MIDDLE STATES SELF-STUDY

APPENDIX F
Report of Task Force on
PROMOTING INTERDISCIPLINARY PROGRAMS AND RESEARCH
ACTIVITIES

August 1996
Submitted by:
Patsy Brannon, Chair
    David Barbe
    Michael Coplan
Edward Engelbride
    Robert Friedel
    Susan Lancer
    Donald Pope-Davis
    Laura Stapleton

THE UNIVERSITY OF MARYLAND AT COLLEGE PARK
Table of Contents for Appendix F

I. Introduction .......................................................... F-1
   A. Task Force Charter .............................................. F-1
   B. Process ................................................................ F-2

II. Interdisciplinary: Definition, Successful Approaches and Measures of Quality . F-6

III. The Role of Interdisciplinary Scholarship, Education and Service at UMCP ........ F-8

IV. Interdisciplinary Programs and Research Activities at UMCP .................... F-11

V. Factors Affecting Interdisciplinary Activities at UMCP ......................... F-16

VI. Recommendations for Developing and Sustaining High Quality Interdisciplinary Programs .......................................................... F-20
   A. Leadership/Environment ......................................... F-22
   B. Faculty Incentives, Rewards and Promotion/Tenure .................. F-22
   C. Resources ................................................................ F-24
   D. Administrative Facilitation ....................................... F-26

VII. Summary ............................................................... F-26

VIII. Reference List .......................................................... F-32

IX. Appendices ............................................................. F-34
   F-A. Survey to Resource Group ....................................... F-34
   F-B. Survey to Newly Promoted Associate Professors ................ F-37
   F-C. Case Study: Chemical Physics ..................................... F-40
   F-D. Case Study: Institute for Systems Research ..................... F-45
I. Introduction

A. Task Force Charter

The Task Force recognized early in the process that the draft charter given by the Executive Committee was beyond its time and resources and perceived an embedded assumption that interdisciplinary programs are inherently of value and important to the institution, but we did not believe that this was a shared assumption across the campus. Therefore, upon consultation with the Executive Committee, we added a set of questions on the scholarly definition of interdisciplinary activities and their importance to the research and educational programs or a land-grant research university. Finally, we prioritized the initial questions and selected five areas for the focus of our report: 1) the definition of interdisciplinary activities and successful approaches in academia; 2) the role of interdisciplinary efforts at UMCP; 3) exemplary interdisciplinary activities currently at UMCP; 4) current ways in which our campus enhances or inhibits interdisciplinary activities; and 5) recommendations to foster high quality interdisciplinary activities. Below is the final charter of the Task Force on Interdisciplinary Programs.

Problem Statement: Our educational mission requires more interdisciplinary curricula and research activities. Our students, both graduate and undergraduate, need the knowledge and skills that transcend traditional disciplinary boundaries and expand their knowledge base into other disciplines. At the same time, faculty are discovering that some of the most significant and exciting research requires that they draw upon the expertise and knowledge of colleagues in other departments and disciplines. Consequently, we need to ensure that there is a barrier-free environment at the University for such activities.

Project Scope: The Task Force sought to answer the following questions in light of the University's educational mission to offer high-quality graduate and undergraduate programs, to undertake research on the cutting edge of knowledge, and to provide expertise in service to the state and nation.

- What is the definition of an interdisciplinary educational program and/or research activity? What are the most successful pedagogical approaches and educational frameworks used in these programs?
- What should be the role of interdisciplinary efforts at the University of Maryland at College Park in light of its mission and resources?
- What interdisciplinary activities currently exist at the University of Maryland at College Park? What programs are exemplary? What are the appropriate measures of quality?
- In what ways does the current system enhance or inhibit the development of interdisciplinary programs?
- What can we do to foster high quality interdisciplinary programs, curricula and research activities?

B. Process
The Task Force on Interdisciplinary Programs and Research Activities was selected to represent the campus community. In December, 1995, the chair, in consultation with the Executive Committee and Steering Committee, began the formulation of the Task Force which was completed in late January, 1996. The membership of the Task Force on Interdisciplinary Programs initially included: David Barbe, Executive Director and Professor of the Clark School of Engineering; Patsy Brannon (Task Force Chair), Chair and Professor of Nutrition and Food Science; Michael Coplan, Research Professor in the Institute of Physical Science and Technology; Edward Engelbride (CQI Facilitator), Graduate Assistant for the Task Force; Robert Friedel, Professor of History; Susan Lanser, Director of Comparative Literature and Professor of English; Donald Pope-Davis, Associate Professor of Counseling and Personnel Services; and Laura Stapleton (Ex-Officio), Senior Research Analyst in Institutional Studies. During the course of the semester, professional commitments and family medical concerns necessitated the resignation of Donald Pope-Davis from the team; due to the timing of this resignation, no replacement was made to the team. The team used a CQI process which was facilitated by Edward Engelbride. As a part of the CQI process, the chair and facilitator met with the other self study task force chairs leaders and facilitators throughout the semester. The Task Force met weekly throughout the spring semester.

We met initially with Dr. Donald Piper, Chair of the Executive Committee, to discuss the scope and process of the Middle States Self-Study. Next, we reviewed the initial project charter, prioritized the questions, discussed our revised charter with the Executive and Steering Committees and finalized our charter in light of the feedback from the Executive and Steering Committees. We requested nominations for our Resource Group from the Deans, the Steering Committee and the Executive Committee. Invitations to serve on our Resource Group were sent to 66 people, of whom 40 accepted (62%). [See Table 1 for a listing of the Resource Group.] Members of the Resource Group represented 16 Colleges or major administrative units: Arts/Humanities (12%), Agriculture and Natural Resources (2%), Computer, Math and Physical Sciences (15%), Behavioral and Social Sciences (17%), Business and Management (5%), Education (12%), Engineering (7%), Health and Human Performance (2%), Library and Information Services (2%), Life Sciences (17%) and Public Affairs (2%). Members also represented more than 15 different interdisciplinary graduate programs, research institutes and undergraduate programs. This Resource Group was surveyed (See Appendix F-A for the survey questionnaire) concerning their perceptions of interdisciplinary activities, model or exemplary interdisciplinary programs, ways in which our campus enhances or inhibits interdisciplinary activities, and suggestions for how interdisciplinary programs could be fostered on our campus. The response rate for this survey was 68% (27/40).

In addition, we surveyed faculty newly promoted to Associate Professor during the past two years to determine what messages they might have received and perceptions they had formed about interdisciplinary activities at UMCP. [See Appendix F-B for survey questionnaire.] Our concern was that the experience relative to interdisciplinary activities might be different for tenured faculty than tenure-eligible faculty. Asking newly promoted faculty offered us the possibility to elicit candid feedback concerning messages received during the tenure-eligible period and to assess their perceptions of the value placed on interdisciplinary scholarship and teaching during tenure review. The response rate from this group was considerably lower than from the Resource Group 18% (11/62), but was informative to our discussions.
## Table 1. Members of the Resource Group

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Title</th>
<th>Department</th>
<th>College/Major Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ibrahim Ades</td>
<td>Assoc. Prof./Chair &amp; Dir</td>
<td>Microbiology &amp; Mol. Cell Biol.</td>
<td>Life Science</td>
</tr>
<tr>
<td>Diane Barlow</td>
<td>Asst. Dean</td>
<td></td>
<td>Library/Info. Serv.</td>
</tr>
<tr>
<td>Philip Candela</td>
<td>Professor</td>
<td>Geology</td>
<td>CMPS</td>
</tr>
<tr>
<td>Avis Cohen</td>
<td>Assoc. Prof./Dir.</td>
<td>Zoology &amp; Cog. Neuroscience</td>
<td>Life Science</td>
</tr>
<tr>
<td>Stephen Crain</td>
<td>Professor/Chair</td>
<td>Linguistics</td>
<td>Arts &amp; Humanities</td>
</tr>
<tr>
<td>Lindley Darden</td>
<td>Professor</td>
<td>Philosophy</td>
<td>Arts &amp; Humanities</td>
</tr>
<tr>
<td>Philip DeShong</td>
<td>Professor</td>
<td>Chemistry /Biochem.</td>
<td>Life Science</td>
</tr>
<tr>
<td>Robert Dooling</td>
<td>Professor</td>
<td>Psychology</td>
<td>BSOS</td>
</tr>
<tr>
<td>Barbara Finkelstein</td>
<td>Professor</td>
<td>Educational Policy</td>
<td>Education</td>
</tr>
<tr>
<td>Thomas Fuja</td>
<td>Assoc. Professor</td>
<td>Electrical Engin.</td>
<td>Engineering</td>
</tr>
<tr>
<td>George Goldenbaum</td>
<td>Assoc. Dean</td>
<td>Physics</td>
<td>CMPS</td>
</tr>
<tr>
<td>James Greenberg</td>
<td>Coordinator</td>
<td>Teacher Ed. Devel.</td>
<td>Education</td>
</tr>
<tr>
<td>Marsha Guenzler</td>
<td>Assoc. Director</td>
<td>Stamp Student Union</td>
<td>Student Affairs</td>
</tr>
<tr>
<td>John Guthrie</td>
<td>Professor</td>
<td>Nat. Reading Ctr.</td>
<td>Education</td>
</tr>
<tr>
<td>William Harwood</td>
<td>Asst. Dean</td>
<td>Chemistry/Biochem.</td>
<td>Undergrad. Studies</td>
</tr>
<tr>
<td>Tamela Heath</td>
<td>Asst. Professor</td>
<td>Couns. Pers. Serv.</td>
<td>Education</td>
</tr>
<tr>
<td>Martin Heisler</td>
<td>Professor</td>
<td>Gov. &amp; Politics</td>
<td>BSOS</td>
</tr>
<tr>
<td>George Helz</td>
<td>Dir., Water Res. Ctr.</td>
<td>Chemistry/Biochem.</td>
<td>Life Science</td>
</tr>
<tr>
<td>Sally Koblinsky</td>
<td>Professor / Chair</td>
<td>Family Studies</td>
<td>HHP</td>
</tr>
<tr>
<td>Thomas McIlrath</td>
<td>Prof./Assoc.Dean</td>
<td>IPST/Grad Studies</td>
<td>CMPS</td>
</tr>
<tr>
<td>Maynard Mack</td>
<td>Assoc. Prof/Dir.</td>
<td>English/Honors</td>
<td>Arts &amp; Humanities</td>
</tr>
<tr>
<td>Steven Marcus</td>
<td>Director</td>
<td>ISR</td>
<td>Engineering</td>
</tr>
<tr>
<td>Robert Mengangas</td>
<td>Ref. Librarian</td>
<td>McKeldin Library</td>
<td>AGNR</td>
</tr>
<tr>
<td>Timothy Ng</td>
<td>Professor</td>
<td>Hort. &amp; Land. Arch.</td>
<td>Education</td>
</tr>
<tr>
<td>Victor Nolet</td>
<td>Asst. Prof.</td>
<td>Special Education</td>
<td>CMPS</td>
</tr>
<tr>
<td>John Ondov</td>
<td>Assoc. Prof.</td>
<td>Chem/Biochem.</td>
<td>Life Science</td>
</tr>
<tr>
<td>Edward Ott</td>
<td>Dist. Univ. Prof.</td>
<td>Elec. Engineering</td>
<td>Engineering</td>
</tr>
<tr>
<td>Dennis Papadopoulos</td>
<td>Professor</td>
<td>Astronomy</td>
<td>BSOS</td>
</tr>
<tr>
<td>Carla Peterson</td>
<td>Professor</td>
<td>Comparative Lit.</td>
<td>Arts &amp; Humanities</td>
</tr>
<tr>
<td>Dennis Pirages</td>
<td>Professor</td>
<td>Gov. &amp; Politics</td>
<td>BSOS</td>
</tr>
<tr>
<td>Stanley Presser</td>
<td>Prof./Dir.</td>
<td>Survey Res. Ctr.</td>
<td>BSOS</td>
</tr>
<tr>
<td>Deborah Rosenfelt</td>
<td>Professor/Dir.</td>
<td>Curr. Transf. Proj./</td>
<td>Arts &amp; Humanities</td>
</tr>
<tr>
<td>Adele Seefeld</td>
<td>Exec. Dir.</td>
<td>Ren. &amp; Baroque St.</td>
<td>Arts and Humanities</td>
</tr>
<tr>
<td>Nancy Shapiro</td>
<td>Exec. Dir.</td>
<td>CP Scholars</td>
<td>UG Studies</td>
</tr>
<tr>
<td>Melanie Stibick</td>
<td>UG student</td>
<td>Soc/Anthro. Major</td>
<td>BSOS</td>
</tr>
<tr>
<td>Ronald Weiner</td>
<td>Professor</td>
<td>Microbiology</td>
<td>Life Science</td>
</tr>
<tr>
<td>Ernest Wilson</td>
<td>Dir.</td>
<td>Ctr. Int. Development/</td>
<td>BSOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conflict Management</td>
<td></td>
</tr>
</tbody>
</table>
The Task Force met individually with Provost Daniel Fallon concerning interdisciplinary activities generally and with Dr. Maynard Mack, Director of the Honors Program, concerning interdisciplinary undergraduate programs. In addition, a member of the task force met individually with Dr. William Hodos, Associate Dean for Graduate Studies and Research, concerning interdisciplinary graduate programs, and Dr. Victor Korenman, concerning interdisciplinary programs and their review.

Our approach used to address each question in our final charge is summarized below.

**Definition of Interdisciplinary/Successful Pedagogical Approaches** - We conducted several literature searches for relevant articles and reviewed a number of references (See Reference List). Task Force members wrote short synopses about the relationship between disciplinary and interdisciplinary scholarship (Disciplinary/Interdisciplinary Dynamic and Interdisciplinary Education and Scholarship); and case studies of interdisciplinary programs [Chemical Physics (Appendix F-C October 28, 1996) and the Institute of Systems Research (Appendix F-D)]. A working definition of interdisciplinary activities was drafted, circulated to our Resource Group for comment, and revised based on their comments. Feedback was elicited from our Resource Group on appropriate measures of quality for interdisciplinary programs.

**Role of Interdisciplinary Activities at UMCP** - The role of interdisciplinary programs was considered by examining the current literature and through discussions with Provost Fallon, feedback from the Resource Group and discussions among the task force.

**Interdisciplinary Activities at UMCP/Exemplary Programs** - We asked each Dean for a list of interdisciplinary programs and activities in his or her unit, the Graduate School for a list of interdisciplinary graduate programs, and Gene Ferrick for a list of MHEC approved interdisciplinary programs. In our surveys, we asked respondents to identify exemplary interdisciplinary programs. We examined recent program reviews for several interdisciplinary programs or units.

**Enhancers/Inhibitors of Interdisciplinary Programs** - We surveyed our Resource Group for their perceptions; reviewed recent reports on Interdisciplinary programs (APAC and Destler reports), the draft Graduate Council report on interdisciplinary programs, the new PCC Guidelines on Interdisciplinary Programs; and discussed these in our meetings with Drs. Fallon, Hodos, Mack and Korenman.

**How to Foster High Quality Interdisciplinary Programs** - We discussed the suggestions from the Resource Group, comments from our meetings with Drs. Fallon, Hodos, Mack and Korenman, and previous suggestions from earlier reports on Interdisciplinary Programs [APAC Report on Criteria for Enhancement and Procedures for Selecting Interdisciplinary Programs, April 1993, and Special Concept Group in Inter-Departmental and Inter-Collegiate Research and Teaching, May 1995 (Destler Report)].

II. Interdisciplinary: Definition, Successful Approaches and Measures of Quality
**Definition:** Interdisciplinary - an adjective describing productive and synergistic interactions among recognized disciplines which entails a mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, knowledge, data, and organization of research, education and approaches to compelling or enduring problems facing society. [Adapted from: “Interdisciplinarity: Problems of Teaching and Research in Universities.”, edited by L. Apostel et al., *Organization for Economic Cooperation and Development*, 1972.]

This definition had broad acceptance from our Resource Group. Key features of this definition are: 1) the interaction necessary among disciplines to create a mutual integration of scholarship, and 2) the value of an interdisciplinary approach to compelling or enduring societal problems. From our earliest discussions, the interaction of disciplinary and interdisciplinary scholarship was a core issue and tension for promoting successful interdisciplinary activities. Successful approaches for fostering interdisciplinary research and education need to consider the dynamic relationship between disciplinary and interdisciplinary scholarship.

**Disciplinary/Interdisciplinary Dynamic.** The concept of disciplines or fields of study is intrinsic to the university idea itself. In the Medieval university, there was, of course, little specialization in the sense that we currently know it, and yet learning was still identified with categories, such as the classical "trivium" (grammar, logic, and rhetoric) and "quadrivium" (geometry, astronomy, arithmetic, music).

The pattern of learning and faculty organization of the first American colleges was built around a unified and uniform curriculum, in which all students pursued the same course of study, attending the lectures of a sequence of professors, who more or less specialized in classical fields, such as mathematics, natural history, rhetoric, and classical languages. Among the early departures from this pattern was the University of Virginia, whose organization in 1825 consisted of seven "colleges:" ancient languages, modern languages, mathematics, natural philosophy (what we would call physical science), moral philosophy (which would include, say, economics), chemistry, and medicine. Students followed the curriculum prescribed by their own college, taking courses outside of this only as time permitted.

Through the course of the nineteenth century, as colleges and universities spread across the United States, more open and liberal curricula appeared to give students access to scientific training and, later, education in engineering or the fine arts. The culmination of this trend may be said to have been the passage of the Morrill Land Grant Act in 1862. The Act specified that in land grant colleges "the leading object shall be, without excluding other scientific and classical studies...to teach such branches of learning as are related to agriculture and the mechanic arts...in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This remarkable charge shaped the disciplinary structure of much of modern American higher education, as it expanded the recognized structure of universities so that the modern university was essentially a loose collection of specializations, with the curriculum firmly in the hands of the departments that defined and cultivated these specializations.

The definition of specializations or disciplines is, it must be apparent by now, an on-going process, determined by a combination of intellectual fashions, social
needs, educational theories, and methodological developments. The evolution of engineering fields exemplifies this process. In the beginning, there was only "engineering." This term was used (in the Renaissance) to refer to the construction of "engines", which were machines for sieges, and hence engineers were military men. The middle of the eighteenth century saw the appearance of individuals who specialized in the construction of non-military "works": roads, bridges, lighthouses, canals, etc. These were thus dubbed "civil engineers" to distinguish them from the military ones. In the 1830s and 1840s, with the emergence of railroads and steamships, individuals with similar capabilities, but more concerned with the design and construction of steam engines, began to call themselves "mechanical engineers". The growth of cities and concern over water supplies and sewerage led to the emergence of sanitary engineering by the 1870s; the growth of the telegraph networks led to electrical engineering in the 1880's; large scale chemical industry to chemical engineering at the turn of the century; aeronautical, nuclear, materials and other fields of engineering followed in due course. Note particularly the extent to which the appearance of disciplines is largely in response to social (as opposed to, say, intellectual) forces. New disciplines, at least in the applied fields, are largely the creation of newly emergent (or important) needs of society. Development of Material Science exemplifies the formation of a discipline driven by a societal need (and governmental resources) through initial interdisciplinary efforts that ultimately led to the creation of a new disciplinary boundary. In other areas, intellectual currents or cultural fashions may be more important.

There are, crudely, two models by which one might characterize the emergence of new disciplines: splitting and joining. In the "splitting" model, a new discipline emerges from specialized segmentation of an established discipline: Sanitary engineering can be said to have been born from specialization amongst civil engineers. Another example might be microbiology, in which the expert use of a new tool (better microscopes) gave rise to a splitting from the larger body of naturalists (note that this same field was also referred to as bacteriology, naming the specialty for its most prominent subject rather than its most important tool). In the "joining" model, new disciplines appear when the work between two or more disciplines becomes sufficiently coherent that the outlines of a new discipline more comfortably accommodate that work than the older disciplines; biochemistry might be given as a classic example. It is important to realize that these two models are not exclusive--real discipline formation frequently consists of both of these mechanisms working, typically one more prominently than the other, but neither exclusively. Obviously, the "joining" model would seem to have more relevance to the question of interdisciplinary study than the other, but this is where it becomes especially important to realize the extent to which both "joining" and "splitting" function together to form new disciplines or fields of study. In other words, creative new scholarship (and teaching) often combines "narrow specialization" and "interdisciplinary" activity, as contradictory as this may at first appear.

III. The Role of Interdisciplinary Scholarship, Education and Service at UMCP

The literature on interdisciplinary scholarship and education, even at its most enthusiastic, is soberingly cautionary in several ways. First, problems of precise definition are inevitable, for disciplines themselves are not definable in simple and
uniform ways, as discussed above. Because disciplines are variously delineated by a range of phenomena from object of study to perspective to epistemology (see Squires, p. 204), a definition of interdisciplinary must necessarily suffer from a certain conceptual vagueness. At the risk of tautology, then, one can say that interdisciplinary scholarship involves the integration within a single intellectual space (a research project, a syllabus, a discussion) of the knowledge, object of study, perspectives, methodologies, and/or self-understanding of at least two (recognized) disciplines. "Real Interdisciplinarity doesn't come from mixing together a bit of this and that. It comes when thought processes reach the point where the disciplinary boundary one comes up against no longer makes sense--when the internal logic of thinking impels a transgression of borderlines. (Brooks, p. 102)

Interdisciplinary scholarship is always dynamic and provisional: from the dialectic of existing disciplines there may emerge a new disciplinary synthesis, as discussed above in the “joining” model of discipline formation. Indeed, many of the fields we currently recognize as disciplines were once "interdisciplinary" fields (sociology, for example), and some fields currently believed to be "interdisciplinary" (women’s studies, for example) are fast developing a demonstrably disciplinary ground. Moreover, some "disciplines" are already interdisciplinary in certain respects--for example, in terms of methodology (e.g. anthropology or nutrition); and some disciplines (such as literature and philosophy) already have such "deep intimacy" with one another that interdisciplinary activity requires little effort and may hardly be recognized as such (Lyon, p. 683).

Secondly, genuinely interdisciplinary teaching and scholarship are at the same time intellectually challenging-- involving the mastery or at least immersion in the methods and materials of at least two fields-- and intellectually suspect, carrying a burden of misunderstanding (and mispractice) that equates interdisciplinary scholarship with a lack of rigor and depth. Interdisciplinary education and research raise the specter of scholars who "know so little about so much that they have mastered nothing" or fears that long-developed methods and specialized knowledge will be "overthrown" (Schochet, p. 12-13). This means that interdisciplinary education faces problems of both perception and execution. Even the most well-grounded interdisciplinary scholarship may face problems of misperception and denigration that will have to be addressed in multiple fora and with multiple constituencies from legislatures and the general public to university administrators, faculty, and students.

Graduate and undergraduate education raise somewhat different issues--or at least different dimensions and intensities of issue--with regard to interdisciplinary scholarship. Undergraduate education is virtually by definition multidisciplinary for most students. Rarely, however, does their educational experience span disciplines in ways that develop an interdisciplinary understanding. Interdisciplinary studies at the undergraduate level have, among other benefits, the possibility to enable such synthesis. At its best, interdisciplinary undergraduate education also seems to be more successful than education in a specific discipline (see, for example, Newell) in promoting scholarly rigor, critical thinking, intellectual excitement and a disciplinary understanding. The curriculum that brings the understandings from several disciplines to bear on a single topic of study seems to be of particular value to the education of undergraduates. However, such curricula, whether in the form of individual courses
or entire programs, must be rigorously based in the disciplinary knowledge of the faculty through collaborative team teaching, team planning, or the inclusion of interdisciplinary scholars. Ideally such collaborative teaching will involve all teaching team members throughout all aspects of the course. Team teaching in which a sequence of team members teach a short segment of the course without the entire teaching team actively involved in the classroom throughout the course is better described as “tag-team” teaching and is less effective in facilitating interdisciplinary understanding and learning. Use of interdisciplinary syllabi, scrutinized and approved by faculty in the relevant disciplines, is intellectually advisable as well as strategically wise.

The possibility of graduate interdisciplinary studies raises a number of cautions beyond those that concern undergraduate education. For better or worse--and there is some disagreement about whether this fact is better or worse--academic practice continues to be heavily grounded in disciplines at the higher levels (Ph.D. education, hiring, etc.); even "interdisciplinary" programs tend to seek out specialists with particular training in a recognized disciplinary field. There are some persuasive intellectual arguments for this conservatism in addition to prejudices of the kind that Thomas Kuhn recognized in *The Structure of Scientific Revolutions*; for example, Locker (1994) cites the additional time and effort required for interdisciplinary work, the problem of conflicting conceptual models, the greater likelihood of error when one is working in a field in which one is less fully trained. On the other hand, interdisciplinary scholarship has many benefits: it gives us new perspectives on--and methods and materials for--our own disciplinary activities; it raises new questions for research; it allows greater collaboration in solving problems of mutual concern. There seems to be some indication, therefore, that early training in interdisciplinary scholarship has recognizable benefits, but that for both intellectual and practical reasons, graduate students should have training in at least one recognized discipline even when they are engaged in interdisciplinary education and research.

There are, therefore, compelling reasons for integrating interdisciplinary education explicitly, genuinely, and rigorously in both undergraduate and graduate curricula. At the undergraduate level, a carefully designed interdisciplinary studies curriculum could indeed constitute the student's major focus of study. At the graduate level, however, great care should be exercised to ground the student fully in the acquisition of a discipline-based paradigm of knowledge and methodology before or concurrently with interdisciplinary training. Interdisciplinary education is neither a shortcut nor a substitute for education in the disciplines that still constitutes the bases of academic organization, teaching, and scholarship. Our educational programs need to integrate both disciplinary specialization and interdisciplinary understanding in order to participate in solving these complex problems our society faces.

Interdisciplinary scholarship, teaching and service are central and critically important means of meeting our land-grant mission. As discussed earlier, interdisciplinary activities are a major way in which new and truly innovative solutions to societal problems are found. Further, interdisciplinary scholarship is one means by which new bodies of knowledge arise. The role of College Park as the flagship campus of the University of Maryland System dictates a continuing role in innovative education and research, which can best be achieved by a healthy disciplinary/interdisciplinary dynamic and an environment that fosters vigorous
Appendix F F-9

interdisciplinary research, education and service.

IV. Interdisciplinary Programs and Research Activities at UMCP

Identification. Identifying interdisciplinary research and educational activities proved to be a difficult, and ultimately, impossible task. Despite employing a number of strategies including asking each Dean for a list of interdisciplinary activities within his or her unit (responses listed in Table 2; note not all Deans responded, so activities in some units are not listed), asking the Graduate School and the Undergraduate Education Office for interdisciplinary educational programs, asking for the Institutional Studies Office for the Maryland Higher Education Commission (MHEC) approved interdisciplinary programs (listed in Table 3), reviewing the undergraduate and graduate catalogues, and reviewing the UMCP faculty/staff directory; we were unable to determine the full scope of interdisciplinary research and educational programs. Adding to the problem of identifying the interdisciplinary activities was the confusion that resulted from contradictory information supplied by different sources, for example the inclusion of interdisciplinary activities from one source but their exclusion from another or the failure of any sources to identify some interdisciplinary programs well known to the Task Force. Neither the undergraduate nor graduate catalogues identify interdisciplinary programs per se, although a few interdisciplinary and interdepartmental graduate programs (such as Molecular and Cellular Biology, Food Science, Nutrition, etc.) are so identified. Few courses are identified as interdisciplinary. Compounding the difficulty is the lack of indexing of “interdisciplinary” in either catalogue.

The Destler Report encouraged consideration of charging the Deans for Graduate Studies and Research and for Undergraduate Studies with specific responsibilities in interdepartmental and intercollegiate research and teaching to include an annual inventory of programs, ensuring inclusion of directors of such programs on distribution lists for communication, overseeing the periodic review of such programs by the Provost’s Office. It appears that no action has yet been taken on this 1995 recommendation.

We initially responded to the challenge of identifying interdisciplinary programs by agreeing strongly with the recommendation in the Destler Report; but upon reflection and through the progression of our discussion, we realized that the dynamic and fluid nature of interdisciplinary activities contributes to the difficulty in identifying them. Furthering the challenge is the diversity of interdisciplinary activities, which range from preliminary research projects between two faculty in different disciplines to large grant-supported research activities to very large and formal research institutes/center and from single interdisciplinary courses to formal interdisciplinary graduate programs to “interdisciplinary” research and educational departmental units. The lack of identification does contribute to the invisibility, particularly to our stakeholders and students, of many interdisciplinary programs, may affect the credibility of such programs, and definitely makes it difficult for our university to conduct periodic reviews of such programs. Currently, only MHEC approved programs undergo periodic review by the Provost’s Office and not all of these have been reviewed within the last five years. Some large centers/institutes within strongly supportive Colleges are periodically reviewed in keeping with the policy of the home college, but not all colleges undertake such reviews of
interdisciplinary activities. One problem contributing to these ad hoc arrangements may be the lack of a sense of ownership of an interdisciplinary program within strongly departmentally-based administrative structures. Indeed, one respondent to our resource group survey commented that interdisciplinary activities on our campus seemed like “add-ons” to the structure. On the other hand, however, rigidly codifying interdisciplinary programs could and likely would erect barriers to the development of interdisciplinary activities.

Finally, the only consensus we reached was not to recommend a specific procedure for identifying interdisciplinary programs. We note the extreme difficulty we encountered in trying to identify the interdisciplinary programs and activities on our campus. Whether our university needs to modify its identification of interdisciplinary programs and activities should be further discussed and considered; but if the recommendation of the Destler Report is followed, any system devised needs to retain the flexibility necessary to facilitate the dynamic and diverse nature of interdisciplinary programs and activities while allowing the needed oversight and review of such programs.

Exemplary Models. In light of the difficulties in identifying interdisciplinary activities, the lack of systematic review of interdisciplinary programs, and the time constraints of this self-study, a detailed evaluation of the interdisciplinary programs was not possible. We chose instead to ask our resource groups in their surveys to list “model” or exemplary interdisciplinary programs. A number of programs were mentioned by respondents. Undergraduate interdisciplinary programs perceived as exemplary by faculty and administrators are the Honors Program, College Park Scholars, GEMSTONE, and the IBM-TQ Program. In addition, the Honors Program was recently nationally ranked in the top nine Honors programs in the ARCO Guide to Honors Programs: Ivy League Programs at State School Prices. Exemplary models of graduate interdisciplinary programs, as perceived by faculty and administrators, include Molecular and Cellular Biology and Comparative Literature.
## Table 2: Interdisciplinary Programs and Research Activities Reported by Colleges

### College of Agriculture and Natural Resources
- 4-H Workforce Preparedness Initiative
- Farm Management Program [Cooperative Extension Service (CES)]
- Food Safety Programs (CES)
- Food Science Program (Graduate)
- Infant Nutrition for Hispanic WIC Populations (CES)
- IPM Program (CES)
- Marine Estuarine Environmental Sciences (Graduate)
- Neural and Cognitive Sciences (Graduate)
- Nutrition (Graduate)
- Water Quality Program (CES)
- WIC 5-A-Day Nutrition Program (CES - Multi-institutional initiative)

### College of Architecture
- Cooperative teaching with School of Public Affairs, Archaeology, Landscape Arch, Art History
- DOE project in Southeast Baltimore/Palmer Park
- Historic Preservation Certificate Program
- Langley Park Project
- Mayor’s Institute on City Design
- Program in City Planning
- Research and Archaeology in Turkey and Israel
- St. Petersburg, Russia trip
- Studio course in Baltimore each year

### College of Arts and Humanities
- Comparative Literature
- Women’s Studies
- Latin American Studies
- Getty/MESL Museum Educational Site

### College of Business and Management
- Business School (joint research accounting/finance, transportation/strategy, information systems/management)
- Center for International Business and Education Research
- IBM-TQ Program
- International Business and Foreign Language Studies
- Institute for Systems Research
- MBA/MSW with University of Baltimore
- MBA/JD with University of Baltimore
- Telecommunications Program

### College of Computer, Mathematical and Physical Sciences
- Analysis of Sodium Channels
- Astronomical Geological Dating
- Atmospheric Chemistry
- Chemical Physics
- Complexity
- Computational Linguistics
- Computer Visualization
- Control of Electromagnetic Materials
- DNA Analysis
- Elastic Solids
- Environmental Geology
- Fluid Dynamics Modeling
- Health Care Management
- Imaging the Tongue
- Land Cover

### College of Engineering
- Bridge Engineering Center
- Center for Environmental Energy Engineering
- Center for Reliability Engineering
- Center for Computer-Aided Life Cycle Engineering
- Center for Smart Structures and Materials
- Center for Satellite and Hybrid Communication Networks
- Center for Optoelectronic Interconnects and Packaging
- Center for Technology Risk Studies
- Engineering Coalition - ECSEL Program
## Table 2: Interdisciplinary Programs and Research Activities Reported by Colleges

<table>
<thead>
<tr>
<th>College of Health and Human Performance</th>
<th>College of Life Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocates for Children, College Park Scholars</td>
<td>Behavior, Ecology, Evolution and Systematics Program</td>
</tr>
<tr>
<td>Campus Health Center Intern Program</td>
<td>Chemical Physics Program</td>
</tr>
<tr>
<td>Family Studies Health Education (Graduate)</td>
<td>Conservation Biology Program</td>
</tr>
<tr>
<td>Graduate Gerontology Certificate Program Center on Aging</td>
<td>Consortium for Systematics and Biodiversity</td>
</tr>
<tr>
<td>Openings Door Program: Sociocultural Barriers to Health Care Access, Johnson Foundation</td>
<td>Maryland Collaborative for Teacher Education</td>
</tr>
<tr>
<td>WIC Five a Day Nutrition (CES)</td>
<td>Water Resources Research Center</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Undergraduate Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Park Scholars</td>
</tr>
<tr>
<td>Advocates for Children, International Studies American Cultures (new for Fall 1996)</td>
</tr>
<tr>
<td>First Year Focus Clusters and Major Clusters</td>
</tr>
<tr>
<td>First Year Book-Book</td>
</tr>
<tr>
<td>Senior Summer Scholarship</td>
</tr>
<tr>
<td>Undergraduate Research Assistant Program</td>
</tr>
<tr>
<td>University Honors Program</td>
</tr>
<tr>
<td>Gemstone</td>
</tr>
<tr>
<td>Honors Humanities</td>
</tr>
<tr>
<td>World Courses</td>
</tr>
</tbody>
</table>

## Table 3: Interdisciplinary Programs from the Academic Program Inventory MHEC

### Upper Division Certificate

<table>
<thead>
<tr>
<th>Women's Studies</th>
<th>Science, Technology and Society (inactive)</th>
</tr>
</thead>
</table>

### Bachelor's

<table>
<thead>
<tr>
<th>Business/Law (with UMAB)</th>
<th>Secondary Education - Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Education - English</td>
<td>Secondary Education - Science</td>
</tr>
<tr>
<td>Secondary Education - Foreign Language</td>
<td>Combined Program - Vet. Science (3+1)</td>
</tr>
<tr>
<td>Secondary Education - Social Studies</td>
<td>Combined Program - Dentistry (3+1)</td>
</tr>
<tr>
<td>Secondary Education - Speech/English Ed</td>
<td>Combined Program - Medicine (3+1)</td>
</tr>
<tr>
<td>Secondary Education - Theater/English Ed</td>
<td>Combined Program - Law (3+1)</td>
</tr>
<tr>
<td>Art Education (K-12)</td>
<td>Independent Studies (student defined)</td>
</tr>
<tr>
<td>Music Education (K-12)</td>
<td>Women's Studies</td>
</tr>
</tbody>
</table>

### Post-Baccalaureate Certificate

<table>
<thead>
<tr>
<th>Gerontology (with UMAB and UMBC)</th>
<th>Women's Studies</th>
</tr>
</thead>
</table>

### Master's

<table>
<thead>
<tr>
<th>Food Science</th>
<th>JD/MBA (with UMAB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry (with UMAB)</td>
<td>Comparative Literature</td>
</tr>
<tr>
<td>Maryland Estuarine Environmental Studies (MEES with UMAB, UMBC, UMES)</td>
<td>Library Science/History</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Library Science/Geography</td>
</tr>
</tbody>
</table>
Exemplary models of interdisciplinary research programs, as perceived by faculty and administrators, include the Institute for Physical Sciences and Technology, the Institute for Systems Research (See Appendix F-D for a “case study” of this program and its history), and the Maryland Estuarine Environmental Studies Program (a combined research and graduate program).

There undoubtedly are other models and exemplary programs on our campus that are not as widely recognized by the members of our resource group. Programmatic evaluation of both research and educational interdisciplinary programs would help identify more objectively other models of exemplary interdisciplinary programs that deserve such recognition.

**Measures of Quality of Interdisciplinary Programs** - Unanimously, respondents to our survey concurred that measures of quality for interdisciplinary programs should be the same as those applied to disciplinary programs. Relative to scholarship and research these include the universally accepted criteria of productivity through peer-reviewed publication, ability to attract external research support, and recognized quality/impact of the scholarship. We concur with these measures of quality and firmly insist that one additional measure of quality should be applied, namely that the scholarship and educational activities should demonstrate true interdisciplinary interactions among recognized disciplines. Only then can the desired synergy and creativity from the intellectual interface among disciplinary perspectives be realized. The APAC Report on Criteria for the Enhancement and Procedures for Selecting Interdisciplinary Programs, 1993, strongly commented that no single criterion is appropriate for the evaluation of interdisciplinary programs and that too much emphasis on quantitative measures may miss other indicators of excellence. Criteria suggested in the APAC report for competitive selection of interdisciplinary programs for enhancement funds include: competitiveness of the proposal; cohesion and integration of the faculty engaged in the interdisciplinary effort; external validation of the proposal from the perspective of the credibility of the societal need, existence of external funds, and the interest of students; sustainability of the effort in terms of personnel and funding; and the future plans for a logical pattern of growth and development of the interdisciplinary program. Future consideration should be given to how the measures of quality described above and the suggested criteria from the APAC report for competitive selection of interdisciplinary programs for enhancement could be refined into a flexible set of criteria that could be used to evaluate

<table>
<thead>
<tr>
<th>Doctoral</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Science (with UMAB and UMBC)</td>
<td>Counseling Psychology</td>
</tr>
<tr>
<td>Biochemistry (with UMAB and UMBC)</td>
<td>Comparative Literature</td>
</tr>
<tr>
<td>Molecular and Cell Biology</td>
<td>Applied Mathematics</td>
</tr>
<tr>
<td>MEES (with UMAB, UMBC, UMES)</td>
<td>Chemical Physics</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Applied Developmental Psychology (with UMBC)</td>
</tr>
<tr>
<td>Toxicology (with UMAB, UMBC, UMES)</td>
<td>Policy Studies (with UMBC)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Master's</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicology (with UMAB, UMBC, UMES)</td>
<td>Applied Mathematics</td>
</tr>
<tr>
<td>Software Engineering (with UMUC)</td>
<td>Chemical Physics</td>
</tr>
<tr>
<td>Systems Engineering</td>
<td>Science History and Philosophy</td>
</tr>
</tbody>
</table>
V. Factors Affecting Interdisciplinary Activities at UMCP

Enhancing Factors. In general, respondents from both our Resource Group and the newly promoted Associate Professor group perceived similar enhancing factors for interdisciplinary activities at UMCP. Comments from these groups are congruent with enhancing factors identified in the previous APAC and Destler Reports, comments from Provost Fallon, Associate Dean Hodos, and Dr. Mack, and the perceptions and experiences of the task force. Two major types of enhancing factors emerged: administrative/structural and leadership/environment.

Administrative/structural factors enhancing interdisciplinary activities on our campus include some types of resource support, the DRIF policy, the existence of research centers and institutes, and some emphasis on interdisciplinary educational programs. The types of resource support identified included funds for summer salaries (GRB) for faculty engaged in interdisciplinary research, availability of internal research grants through the GRB that can be used to support interdisciplinary research, availability of matching funds to support interdisciplinary efforts funded by external sources, availability and administrative willingness (in some units) to make space available for interdisciplinary activities, and assistance on campus to identify possible external fund sources to support the development or maintenance of interdisciplinary activities. The Destler Report also points to the support of Deans for interdepartmental and intercollegiate research and teaching that is evidenced by the mention of interdisciplinary activities in 10 of the 13 unit strategic plans. In addition, the ease of making joint faculty appointments and affiliate appointments is perceived as facilitating interdisciplinary activities.

The DRIF policy allows for shared distribution of funds among participating units of interdisciplinary and interdepartmental research. The Destler Report of 1995 also highlighted this DRIF policy which by allowing shared distribution of DRIF encourages units to partner in research to their mutual benefit and creates a supportive administrative environment for interdisciplinary research.

Strong and successful research centers and institutes encourage interdisciplinary efforts. Such entities as the Institute for Systems Research, the Institute for Physical Science and Technology, the Survey Research Center, etc. demonstrate the success of this type of administrative structure on our campus. Such centers and institutes serve as focal points for intellectual exchange and interdisciplinary scholarship and sustain the critical mass necessary for successful research and training grants.

The nature of the emphasis on interdisciplinary educational programs on our campus includes some successful and highly visible programs, some types of administrative facilitation, and some campus leadership and support for such efforts. A number of strong and highly visible interdisciplinary educational programs exist on our campus including the Curriculum Transformation Project, the Honors Program, the College Park Scholars Program and GEMSTONE. In addition, the Center for Teaching Excellence serves as a resource for enhancing educational programs and is
supportive of interdisciplinary educational programs. The types of administrative facilitation include the policy whereby workload credit is given to the tenure-home department of the instructor (Destler report), thus encouraging departments to participate in interdisciplinary and interdepartmental instruction, and the relatively new ability to split teaching workload credit for team-taught courses. Cross-listing of courses is relatively easy administratively and there is support among the faculty PCC committees for cross-listing (Destler Report).

In conclusion, the Destler Report on Interdepartmental and Intercollegiate Research and Teaching described our campus as giving strong support to interdisciplinary programs. Our respondents also highlighted the leadership and environment of our campus as supportive of interdisciplinary programs. Vocal support of interdisciplinary activities by the administration is readily perceived by faculty. Our campus also provides an environment that does not interfere with interactions among faculty across units. This is not to say that inhibiting factors do not exist on our campus; our self-study and the Destler report conclude that a number of factors impede the development and enhancement of interdisciplinary programs.

Inhibiting Factors. The inhibiting factors perceived in our self-study include: leadership/environment; administrative/structural; faculty incentive, rewards and promotion; and resource support. Similar issues emerged from the comments of our resource groups and from the Destler Report. For two of these factors, leadership/environment and administrative/structural, there are both inhibiting and enhancing aspects on our campus. These inhibiting factors limit the development of interdisciplinary activities and in many cases serve as effective barriers to sustaining or enhancing existing interdisciplinary efforts.

In terms of leadership, we lack campus-level advocates who provide effective leadership in the development, formulation and implementation of administrative policies that consider the needs of interdisciplinary programs on our campus. Despite the general support of the Deans, Provost, and President, we lack strong public language that stresses the value and importance to our mission of interdisciplinary research, education and service. Faculty encouragement is needed from the Provost’s Office to engage in and sustain interdisciplinary activities.

The administrative/structural factors that inhibit interdisciplinary activities on our campus include: the strongly discipline/departmental base of our university; the lack of support by some departments and colleges; and various administrative policies that promote direct competition between departmental and interdisciplinary programs rather than encouraging cooperation. In nearly all ways, the department is the intellectual, administrative and reward base for the faculty on our campus. Some interdisciplinary programs are required to have College/department administrative “homes”, presumably for accountability. One respondent described interdisciplinary programs as a “structural add-on”, effectively capturing the administratively marginalized position of many interdisciplinary programs. Despite perceptions by some that our campus has strong support for interdisciplinary programs, the Destler Report describes interdisciplinary activities as being at the bottom of everyone’s priorities. Unfortunately, interdisciplinary programs and activities are frequently seen as peripheral rather than as central and necessary to our mission. Despite strong support for interdisciplinary activities in some colleges and departments, others are indifferent or openly hostile to interdisciplinary efforts by their faculty and appear to
perceive such interdisciplinary efforts as directly competitive and disruptive to
“departmental” goals. Some administrative policies and practices such as current
research expenditures, student-credit hour and degree allocation, and “major” based
funding do promote inter-unit competition for majors, faculty productivity and faculty
commitment and, unfortunately, thereby foster the direct competition of departmental
programs with interdisciplinary programs. The lack of campus advocates, as
discussed above, for interdisciplinary programs in the central administration
exacerbates this problem.

Many inhibiting factors surround issues of faculty incentives, rewards and
promotion/tenure. Virtually all tangible rewards are discipline/departmentally based,
with the visible exception of the GRB competitive research awards, and even these
must be ranked by departmental chairs who may or may not value interdisciplinary
activities in their rankings. Merit pay, promotion and tenure review, research awards
are all strongly, if not exclusively, housed in the department. Even for jointly
appointed faculty, there is one tenure home department, which has no formal obligation
to consider interdisciplinary activities per se and may even resent such activities as
demonstrating a lack of departmental loyalty. There is presently no formal means
whereby interdisciplinary program input or review can be incorporated into the
Promotion and Tenure review process. All research awards on our campus are
individually-based. We have no research award for a team of investigators, let alone
one that recognizes interdisciplinary efforts. We have no teaching award for
interdisciplinary educational effort or team-teaching. There is considerable variance
across our campus on teaching load policies and release time to support
interdepartmental and interdisciplinary educational programs. The difficulty that the
Honors Program faces in eliciting sufficient Honors courses, even with a small
financial incentive to departments with participating faculty, exemplifies the
difficulties that interdisciplinary educational programs face. Our faculty are
overloaded as we “right-size” our programs and lack motivation to volunteer their
efforts in ways that our institution fails to credit, reward or recognize.

Resource support is a major barrier to interdisciplinary programs on our
campus. There is usually no predictable support or funding distinct from the strong
disciplinary/departmentally based-budgeting of our campus. Successful programs,
therefore, are generally those in areas where sufficient external funds are or have been
available or are ones that require little support to initiate. The lack of predictable
streams of funding to sustain and enhance high-quality interdisciplinary programs
coupled with the campus openness to new interdisciplinary initiatives leads to a high
initiation rate of interdisciplinary efforts on our campus; but many of which these fail
to reach their potential. An apt analogy is that we let all “seeds” of good
interdisciplinary efforts get started in our garden, but fail to make sure that sufficient
resources allow the plants to mature. The Destler Report also comments on the
inadequate and limited duration of financial support for interdisciplinary programs.
Too frequently the initiation is from soft money without consideration of base funding,
which must then be found by Deans or Chairs. Financial uncertainties are also
associated with rotating appointments in state-supported interdisciplinary research
units, which may serve as an impediment for such appointments by chairs. The
Graduate Council, in its current deliberations about Graduate Interdisciplinary
Programs, also is concerned about the lack of predictable streams of funding to support
and sustain interdisciplinary programs.
VI. Recommendations for Developing and Sustaining High Quality Interdisciplinary Programs

Our recommendations to enhance Interdisciplinary Programs focus on four issues: 1) campus leadership and environment, 2) faculty incentives, rewards, and reviews, 3) financial resources, and 4) administrative facilitation. Currently, the climate for interdisciplinary programs at UMCP can best be described as "laissez-faire" and entrepreneurial, in which the initiation and sustenance of interdisciplinary activities are heavily dependent on external funding opportunities and support. Further, the administrative structures and intellectual communities of our campus, as discussed above, are strongly grounded in the departments. This departmentally-based structure remains important, but what is missing from our current environment is the means to establish the kind of intellectual environment in which faculty can engage in scholarly inquiry and education across departmental and college boundaries and in which innovative interdisciplinary research, education and service can thrive. Tangible resources and incentives are needed, not just for the sake of the resources themselves, but to overcome the faculty’s allegiance to the departmental system. A goal for our campus should be a system that fosters multiple allegiances by the faculty. Until this goal is reached, interdisciplinary programs may continue to be seen as a luxury to be funded by external sources, rather than a systemic activity crucial to accomplish research, educational and service missions of our University. The generation of innovative scholarship can only come from the interface among disciplines through interdisciplinary discourse and is central to our mission. What is also missing are the financial resources to initiate new programs or enhance existing programs in order either to develop such programs to the stage of competitiveness for external funding or to support the development of important areas for which little external funding is available. Changing the climate to enhance interdisciplinary activities thus requires 1) strong and consistent leadership by the President, Provost and Deans, 2) strengthening of interdisciplinary and cross-departmental interactions among the faculty, and 3) the investment of resources in selected programs to build outstanding interdisciplinary programs.

In implementing these changes, care must be taken to ensure that interdisciplinary programs, be they research, educational or service, undergo periodic peer-review of their quality and on-going need by the institution analogous to the periodic review of departments. Concern exists among some faculty and administrators that resource reallocation to support interdisciplinary programs without regard to their quality, contribution or need will ultimately lead to “entitlement” of these programs without peer-review. Conversely, built-in “sunset clauses” to interdisciplinary programs, as proposed presently by some groups, wrongly assume that interdisciplinary programs are necessarily only of short term value. Interdisciplinary programs are dynamic by their very nature, and periodic review of their contribution and continued need is important. Our university also needs to consider how interdisciplinary programs will be supported so that they are not perceived to compete directly with departments for limited faculty and funding resources. Developing incentives through which departments can partner with interdisciplinary programs to enhance departmental goals as well as the interdisciplinary goals will be important in achieving more support for interdisciplinary units. Interdisciplinary education needs to be fostered to prepare our
students to address the increasingly complex problems in the workplace and society. Departments and faculty need to be encouraged to participate and contribute to interdisciplinary and interdepartmental education in order for our university to maintain and enhance its educational excellence. Ideally every faculty member will ultimately be both a member of a department and an active contributor to interdisciplinary programs.

A. Leadership/Environment

Recommendation 1: The President, Provost and Deans need to provide leadership in articulating the important and necessary role of interdisciplinary scholarship, education and service in achieving the land-grant mission of our university. Further, the President, Provost and Deans need to provide public encouragement and recognition of exemplary interdisciplinary programs.

Action 1: Campus leaders and public relations shall commit to recognizing publicly interdisciplinary activities. Action 2: In this effort, we need a more effective means of identifying interdisciplinary programs and activities in order to encourage and promote interdisciplinary activities. Care must be taken in identifying interdisciplinary activities to recognize the fluid and dynamic nature of such interdisciplinary activities and avoid rigidly codifying them and stifling their flexibility.

Recommendation 2: Our campus needs to develop an intellectual community, which provides formal and informal opportunities for interdisciplinary discussions among faculty across departmental and college boundaries. Examples of activities that could contribute to the development of the desired intellectual community include, but are not limited to: a faculty club, interdisciplinary workshops, and the Graduate Research Interaction Day. As plans are developed and implemented, concern needs to be given to how to encourage faculty participation and inform the campus about the activities.

Action 3: In the Fall 1996, the Provost shall appoint a cross-disciplinary team to look at ways to change the UMCP environment to include interdisciplinary and interdepartmental opportunities as alternatives to the strong departmentally-based intellectual communities on our campus.

B. Faculty Incentives, Rewards and Promotion/Tenure

Recommendation 3: Our campus has no awards recognizing interdisciplinary research, education or service by faculty. One existing award recognizes one graduate student for interdisciplinary research. Recognition and reward of outstanding interdisciplinary research, teaching and service would send a visible and unmistakable message to the campus that our University does value Interdisciplinary Programs and the faculty’s contributions to these programs.

Action 4: The Provost’s Office should establish in 1996-97 annual awards with a monetary award for 1) Outstanding Interdisciplinary Research (to be awarded to either an individual or team effort) and 2) Outstanding
Interdisciplinary Teaching.

**Recommendation 4:** A major problem for many established faculty who are interested in interdisciplinary programs is the need to develop their scholarship in another discipline to advance their own interdisciplinary work. Time for such faculty development is rare, but needed. We recommend that a competitive program be established whereby a one semester Interdisciplinary Faculty Award would permit selected scholars with demonstrated excellence in their primary discipline to study another discipline. We believe that such a system could be financed by a pool of funds to provide faculty release time for their teaching for one semester and that the faculty’s study could generally be accomplished on our own campus. Required activities of the faculty during this Development Semester would include full participation in graduate seminars or courses in the selected discipline and subsequent development of interdisciplinary courses or research activities. In addition, funds could be requested for seed money for operations or materials for interdisciplinary research or development of an interdisciplinary course. Funds to pilot such an Interdisciplinary Faculty Development Program should be sought externally from suitable Foundations such as Mellon or Kellogg by the Provost.

**Action 5:** The Provost shall appoint by January 1997 a committee to develop an Interdisciplinary Faculty Development Program. This committee shall report to the Provost by January 1998.

**Recommendation 5:** A major problem on our campus is the lack of structured input into the Promotion and Tenure and Post-tenure Review of faculty with substantive interdisciplinary scholarship or teaching activities when the tenure home of those faculty is not within an interdisciplinary program/unit with tenure authority. Given the multiple models of interdisciplinary programs [some have tenure authority and budget lines; some have no tenure authority and no budget lines; and still others have no tenure authority, but have budget lines], there is uneven consideration of interdisciplinary activities in promotion and tenure and post-tenure review of candidates with substantive interdisciplinary activities. We recommend that interdisciplinary scholarship, teaching and service be considered along with disciplinary activities in these reviews. The 1995 Destler Report recommends that an outside representative from an interdisciplinary unit or program be appointed to the departmental APT Committee for any candidate who has engaged in substantive interdisciplinary activity. We concur with this recommendation and urge its immediate implementation. We also recommend that materials documenting interdisciplinary activities should be included in the APT and Post-tenure Review packets so that the quality and contribution of their interdisciplinary activities can be evaluated.

**Action 6:** The Provost’s Office shall initiate revision of the format of the APT and Post-tenure Review documents to ensure that interdisciplinary scholarship, teaching and service are explicitly included.

**Action 7:** The Campus Senate shall be asked to revise the APT and Post-tenure Review policies so that outside representation of interdisciplinary programs/units are appointed to the departmental APT and Post-tenure Review Committees for candidates with substantive interdisciplinary activities.
Recommendation 6: Another problem for interdisciplinary educational programs at the graduate or undergraduate level is faculty release time from departmental teaching obligations. Such problems exist in the Honors Program, College Park Scholars Program and interdisciplinary graduate programs with curricular authority but no tenure authority or budgeted lines (such as Cognitive and Neuroscience or Molecular and Cell Biology Programs). The absence of release time to support interdisciplinary/interdepartmental teaching programs is a major barrier to interdisciplinary educational programs and also creates resistance to new initiatives. Departmental units need to be rewarded for supporting interdisciplinary programs through a competitive process for replacement faculty (Visiting Scholars, Post-doctoral Teaching Fellows, etc). This provides a solution whereby interdisciplinary programs can maintain their curricula and so can departments. The 1995 Destler Report also recommended faculty release time to support Interdisciplinary Programs, but such a program has not yet been implemented.

Action 8: The Provost, Dean for Graduate Studies and Research and the Dean for Undergraduate Studies shall create a faculty release incentive program.

C. Resources

Recommendation 7: We recommend that an Interdisciplinary Development Program be initiated from the Provost's Office and the Graduate Studies and Research Office to provide start-up funds for new interdisciplinary programs or enhancement funds for existing interdisciplinary programs. Preference should be given to programs that will foster interdisciplinary education at the undergraduate and graduate levels. Programs that focus solely on interdisciplinary research without an educational component are important, but should seek, where possible, external funds for their development or enhancement. The campus needs to find a means of supporting the development of selected new and emerging interdisciplinary programs, which otherwise will have inadequate opportunity to achieve excellence. A number of existing or emerging programs could immediately benefit from such a Development Program. The need for such a competitive pool of funds has been recognized by previous campus studies, and a proposal was made in the 1993 APAC Report to develop such a program (the Faculty Initiative Program). Our recommendation modifies this earlier and unimplemented proposal in order to create more flexibility in the range of funding and in order to support both the initiation and enhancement of interdisciplinary activities. Integral to both proposals, however, is a peer-reviewed competitive process to ensure that resources are invested in the highest quality efforts.

This program should provide funds through a peer-reviewed process for a pilot period of eight years to allow a three year period of competitive initiatives and a five year period of support for selected initiatives in each year. The amount of funding that a program can request should be flexible, but a maximal and minimal range should be established. Funds could be used to support a variety of initiatives, including (but not limited to) undergraduate research experiences, course development, faculty release time, graduate student support, seminar/workshop support, seed grant funds, or support services for the activity. Funds should come from a central source (such as the Provost's Office and the Graduate Studies and Research Office); but modest contributing or partial matching funds from Deans, Department Chairs or Unit Directors should be considered. The willingness of the
Deans, Department Chairs or Unit Directors to support a successful ongoing program needs to be determined so that priority programs will have means of sustaining their activities past the period of the Development Award.

**Action 9:** We recommend that the Provost appoint a committee to plan the Interdisciplinary Development Program during 1996-97 for its implementation in 1997-98 and identify the resources needed to allow funding for a pilot period of eight years to enable a three year period of competitive initiatives and a five year period of support for selected initiatives in each year.

**Recommendation 8:** The Provost, Associate Vice-President for Graduate Studies and Research and the Deans should be charged by the President with identifying predictable streams of funding for successful interdisciplinary programs. The departmental budgeting unit is well-justified and needed, but an administrative structure for funding successful interdisciplinary programs is also needed. A mutually beneficial strategy is needed that encourages departments to support interdisciplinary programs so that interdisciplinary programs are not perceived as competitors of departmental units.

**Action 10:** By July 1, 1997 the Provost and Deans shall identify how predictable streams of funding will be made to interdisciplinary programs.

**D. Administrative Facilitation**

**Recommendation 9:** A major problem remains credit for courses with multiple instructors. We can now, with some effort and difficulty, split credit for a team-taught course in which each team instructor handles only a portion of the course. Such courses are best described as “tag-team” taught courses. However, there still is no mechanism of recognizing courses in which the team members collaboratively team teach the entire course together. Such courses are the desired model for interdisciplinary courses, but require substantive effort exceeding that of single instructor courses. Therefore, all team members should receive full-credit for teaching the course. This means that the sum of teaching credit will be greater that 100%. In reality the actual effort of this type of true team-teaching equals “the number of instructors times 100%”.

**Action 11:** The Provost shall make possible full credit for each member of interdisciplinary collaborative teaching team. Such efforts may necessitate a request to the Campus Senate to revise the UMCP Teaching Workload Policy and, possibly, to the UMS to revise its policy.

**Recommendation 10:** There is no mechanism, yet, for listing multiple instructors of team-taught courses in the course schedule, but one is needed to highlight interdisciplinary team taught courses for the students.

**Action 12:** The Records and Registration Director will revise the course listing in the schedule of classes to list multiple instructors of team taught courses.

**VII. Summary**
Task Force Charter: Problem Statement. Our educational mission requires more interdisciplinary curricula and research activities. Consequently we need to ensure that there is a barrier-free environment at the University for such activities.

Project Scope. This self-study addressed five prioritized questions: 1) the definition of interdisciplinary activities and successful approaches in academia; 2) the role of interdisciplinary efforts at UMCP; 3) interdisciplinary activities and exemplary programs at UMCP; 4) current ways in which our campus enhances or inhibits interdisciplinary activities; and 5) recommendations to foster high quality interdisciplinary activities.

Process: Using a CQI process, we (the task force) first finalized our charter in consultation with the Executive and Steering Committees. We surveyed our resource group of 40 faculty and administrators who broadly represented our campus community concerning their perceptions of Interdisciplinary activities, model or exemplary interdisciplinary programs, ways in which our campus enhances or inhibits interdisciplinary activities, and suggestions for how interdisciplinary programs could be fostered on our campus. In addition we surveyed faculty newly promoted to Associate Professor in the past two years to determine what messages they had received about and perceptions they had formed of interdisciplinary activities at UMCP.

Interdisciplinary Definition and Relationship with Disciplines: Interdisciplinary - an adjective describing productive and synergistic interactions among recognized disciplines which entails a mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, knowledge, data and organization of research, education and approaches to compelling or enduring problems facing society. [Adapted from: “Interdisciplinarity: Problems of Teaching and Research in Universititates.” , edited by Apostel et al., Organization for Economic Cooperation and Development, 1972.] As defined, there is an interaction between disciplinary and interdisciplinary scholarship. In fact one way in which new disciplines appear is through interdisciplinary scholarship when the work between two or more existing disciplines becomes sufficiently coherent that the outlines of a new discipline more comfortably accommodate that work than older disciplines. Frequently, such interdisciplinary scholarship is driven by societal needs that require solutions at the interface of two or more disciplines.

Role of Interdisciplinary Scholarship, Education and Service at UMCP: Given our land-grant mission, interdisciplinary scholarship, teaching and service are central and critically important to our mission. Interdisciplinary activities are a major source of both new knowledge and truly innovative solutions to societal problems. Undergraduate education is virtually by definition multidisciplinary for students; but rarely does the undergraduate educational experience span disciplines in ways that develop an interdisciplinary understanding. Yet, at its best, interdisciplinary education promotes in undergraduate students scholarly rigor, critical thinking, intellectual excitement, and disciplinary understanding even better than does education in a specific discipline. The role of our campus as the flagship of the University of Maryland System dictates a continuing role in innovative scholarship, education and research, which can best be achieved by a healthy disciplinary/interdisciplinary dynamic and an environment that fosters vigorous interdisciplinary research, education
Identification of Interdisciplinary Programs at UMCP: Identifying interdisciplinary research and educational activities proved to be a difficult and, ultimately, impossible task. Although we employed a number of strategies, we were unable to determine the full scope of interdisciplinary activities on our campus. Upon reflection, we realized that the dynamic and fluid nature and diversity of interdisciplinary activities contribute to the difficulty in identifying them. The lack of identification does contribute to the invisibility, particularly to our stakeholders and students, of many interdisciplinary programs, may affect the credibility of such programs, and definitely makes it difficult for us to conduct periodic review of interdisciplinary programs. In light of these difficulties, the lack of systematic review of interdisciplinary programs, and the time constraints of this self-study; a detailed evaluation of interdisciplinary programs was not possible. From our resource group, a number of interdisciplinary activities, programs, or institutes were clearly perceived to be models; but there are undoubtedly other model programs that are not as widely recognized as those listed by our resource group. Perceived models include, at the undergraduate level, the Honors Program, GEMSTONE, and the IBM-TQ program; at the graduate level, Molecular Biology and Comparative Literature; and for research, the Institute of Physical Sciences and Technology, the Institute for Systems Research and the Maryland Estuarine Environmental Studies Program. Programmatic evaluation of both interdisciplinary research and educational programs would help identify more objectively other exemplary programs.

Factors Affecting Interdisciplinary Activities at UMCP: Enhancing Factors. Strong consensus on enhancing factors that foster interdisciplinary efforts emerged from our surveys, our discussions and previous reports by APAC and the Special Concept Group on Interdepartmental and Intercollegiate Programs. Two major types of enhancing factors were cited: administrative structure and leadership/environment. Administrative/structural factors enhancing interdisciplinary activities on our campus include some types of resource support (notably GRB) and the DRIF policy allowing for reasonable sharing among units; the success of research centers and institutes fostering critical intellectual interactions; and some emphasis on interdisciplinary education most notably strong and visible interdisciplinary programs such as the Honors program, GEMSTONE, College Park Scholars and the Center for Teaching Excellence and the workload policy crediting the home department of the instructor. A supportive environment was also cited with note of the vocal support by campus leaders.

Inhibiting Factors. The inhibiting factors perceived from our study, our discussions and the Special Concept Group’s report focus on four areas: 1) leadership/environment; 2) administrative structural issues; 3) faculty incentives, rewards and promotion; and 4) resource support. For two of these (leadership/environment and administrative/structure), both enhancing and inhibiting factors are found. We lack campus-level advocates who provide effective leadership in policy formulation for interdisciplinary programs. Administrative/structural factors that inhibit interdisciplinary activities on our campus include: the strong discipline/departmental base to our university and the various administrative policies that promote direct competition among departments and interdisciplinary programs. In nearly all ways, the department is the intellectual, administrative and reward base
for the faculty on our campus. Virtually all tangible rewards are departmentally-based. Merit pay, promotion and tenure review, and research awards are all strongly grounded, if not exclusively housed like tenure, in departments. Interdisciplinary programs lack predictable support or funding distinct from the strong departmentally-based budgeting of our campus. This departmentally-based structure remains important, but what is missing are the means to foster an intellectual community in which faculty can engage in scholarly inquiry and education across departmental and college boundaries. A goal for our campus should be a system that fosters multiple allegiances by the faculty.

Recommendations: Improving the climate to enhance interdisciplinary scholarship, teaching and service requires strong and consistent leadership by the President, Provost, and Deans, strengthening of interdisciplinary and cross-departmental interactions among faculty, and the selective investment of resources to build outstanding interdisciplinary programs. In implementing these changes, care must be taken to ensure that interdisciplinary programs undergo periodic peer-review of their quality and on-going need, analogous to the periodic review of departmental programs. Our ten specific recommendations and twelve action items to enhance interdisciplinary activities focus on four issues: 1) campus leadership and environment; 2) faculty incentives, rewards, and review; 3) financial resources and 4) administrative facilitation.

Recommendation 1: The President, Provost and Deans need to provide leadership articulating the important and necessary role of interdisciplinary efforts to our land-grant mission and provide public encouragement and recognition of exemplary interdisciplinary programs. Action 1: Campus leaders and public relation efforts shall commit to public recognition of interdisciplinary activities. Action 2: Develop a more effective means of identifying interdisciplinary programs and activities that still allows for the fluid and dynamic nature of these programs.

Recommendation 2: Develop an intellectual community that provides formal and informal opportunities for interdisciplinary discussions among faculty across departmental and college boundaries. Action 3: The Provost shall appoint a cross-disciplinary team in Fall 1996 to develop ways to change the UMCP environment to encourage interdisciplinary opportunities and intellectual communities.

Recommendation 3: Recognize and reward outstanding interdisciplinary research, teaching and service in ways that send a visible and unmistakable message to the campus that interdisciplinary programs and the faculty contributions to such programs are valued. Action 4: The Provost’s Office should establish in 1996-97 annual awards for Outstanding Interdisciplinary Research and for Outstanding Interdisciplinary Teaching.

Recommendation 4: Establish a competitive Faculty Development program whereby one semester faculty awards would be available to selected scholars to study another discipline. Action 5: The Provost shall appoint by January 1997 a committee to develop a proposal for an Interdisciplinary Faculty Development Program.
Recommendation 5: Interdisciplinary scholarship, teaching and service should be considered along with disciplinary activities in the promotion and tenure and post-tenure reviews. Action 6: The Provost’s Office shall initiate revision of the format of the promotion and tenure and post-tenure review documentation to ensure that interdisciplinary scholarship, teaching and service are explicitly included. Action 7: The Campus Senate shall be asked to revise promotion and tenure and post-tenure review documentation to ensure that interdisciplinary programs/units are appointed to departmental APT and Post-Tenure review committees for faculty with substantive interdisciplinary activities.

Recommendation 6: Departmental units need to be rewarded for supporting interdisciplinary educational programs by establishing a faculty release incentive program that provides competitive funds for replacement faculty. Action 8: Creation of a faculty release incentive program by the Provost, Dean for Graduate Studies and Research and the Dean for Undergraduate Studies.

Recommendation 7: An Interdisciplinary Development Program shall be initiated from the Provost’s Office and the Graduate Studies and Research Office to provide start-up funds for new interdisciplinary programs or enhancement funds for existing interdisciplinary programs through a competitive peer-reviewed process. Action 9: The Provost shall appoint a committee to plan the Interdisciplinary Development Program during 1996-97 for its implementation in 1997-98 and identify resources needed to allow funding for a pilot period of eight years.

Recommendation 8: Predictable streams of funding for successful interdisciplinary programs should be identified. Action 10: By July 1, 1997 the Provost and Deans shall identify the means by which predictable streams of funding will be available to interdisciplinary programs.

Recommendation 9: A mechanism shall be developed for recognizing interdisciplinary collaboratively team taught courses in which all the faculty involved are engaged in instruction throughout the entire course. Action 11: The Provost shall make possible full credit for each member of an interdisciplinary collaborative teaching team.

Recommendation 10: A mechanism shall be developed for listing multiple instructors of a team taught courses in the schedule of classes to highlight interdisciplinary team-taught courses. Action 12: The Records and Registration Director will revise the course listings in the schedule of classes to list multiple instructors of team taught courses.
Reference List

The following materials were reviewed by members of the Self-Study Team on Interdisciplinary Programs and Research Activities.


UMCP Graduate Council (1996) Recommendations for Interdepartmental, Intercollege, Intercampus, and Interinstitutional Graduate Programs, (draft)
prepared by the Graduate Council Ad Hoc Committee on Interdepartmental Graduate Programs, Dr. M. Heisler, Chair, May 24, 1996.


University of Maryland at College Park Mission Statement, Approved by University of Maryland System Board of Regents, May 7, 1993, 3 pages.

APPENDIX F-A

MIDDLE STATES REVIEW:

TASK FORCE ON
PROMOTING INTERDISCIPLINARY PROGRAMS AND RESEARCH
ACTIVITIES

SURVEY TO RESOURCE GROUP
NAME:____________________________________

INTERDISCIPLINARY PROGRAMS AND RESEARCH ACTIVITIES
RESOURCE GROUP RESPONSE FORM

Please respond to the following questions regarding interdisciplinary programs and research activities. Use additional pages as necessary.

Interdisciplinary: “An adjective describing the interaction among two or more different <recognized> disciplines. This interaction may range from simple communication of ideas to the mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, <knowledge> data, and organization of research and education in a fairly large field.”

1) Does this definition capture your understanding of interdisciplinary? If not, how would you modify this definition?

2) What do you consider the most successful interdisciplinary programs and activities (instructional or research) at the University of Maryland-College Park?

3) What are the appropriate measures of quality for interdisciplinary programs and research activities? How are they different from discipline based programs?

4) Do you know of any potentially worthwhile interdisciplinary programs or activities that have failed at the University of Maryland-College Park? If so, what factors from your perspective contributed to the failure?
5) In what ways does the University encourage interdisciplinary efforts?

6) In what ways does the University discourage interdisciplinary efforts?

7) What can the University do to foster high quality interdisciplinary programs, curricula, and research activities?

8) Please add any additional comments concerning interdisciplinary programs and activities at the University of Maryland-College Park.

Please return this form by Friday, May 10, 1996 to:

Dr. Patsy Brannon  
Chair, Task Force on Interdisciplinary Programs  
3304 Marie Mount Hall

FAX#: 314-9327  
E-mail: pb88@umail.umd.edu
APPENDIX F-B

MIDDLE STATES REVIEW:

TASK FORCE ON
PROMOTING INTERDISCIPLINARY PROGRAMS AND RESEARCH
ACTIVITIES

SURVEY TO NEWLY PROMOTED ASSOCIATE PROFESSORS
The Task Force on Interdisciplinary Programs and Research Activities has accepted the following definition of interdisciplinary. Please refer to this definition in completing this form.

Interdisciplinary: “An adjective describing the interaction among two or more different recognized disciplines. This interaction may range from simple communication of ideas to the mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, knowledge, data, and organization of research and education in a fairly large field.” (Excerpted from: “Interdisciplinarity: Problems of Teaching and Research in Universities,” edited by L. Apostel, et al., Organization for Economic Co-operation and Development, 1972. Italics added by Task Force.)

1) A - What messages, if any, did you receive during your pre-tenure period about the value of interdisciplinary activities or the wisdom of your participation in such activities?

B - From whom did you receive these messages?

2) Have you engaged in interdisciplinary research or institutional programs as defined above?

If “Yes,” please answer the following questions. If “No,” skip #3 and go to questions #4 & #5.

3) A - Did you engage in interdisciplinary activity during your tenure eligible period?

B - If so, how were your interdisciplinary activities considered during your Promotion and Tenure review?
C - Were the interdisciplinary activities within your department or interdepartmental?

D - What barriers, if any, have you encountered for these interdisciplinary activities?

E - What support or facilitation, if any, have you encountered for these interdisciplinary studies?

4) Would you like to engage in interdisciplinary activities? If so, how could UMCP improve your ability to do interdisciplinary research or instruction?

5) Please add any other thoughts or impressions you have regarding interdisciplinary activities at UMCP.

Please return this form by Wednesday, May 22, 1996, to:

Dr. Patsy Brannon  
Chair, Task Force on Interdisciplinary Programs and Research Activities  
3304 Marie Mount Hall  
E-mail: pb88@umail.umd.edu  
FAX: 314-9327
APPENDIX F-C

MIDDLE STATES REVIEW:

TASK FORCE ON
PROMOTING INTERDISCIPLINARY PROGRAMS AND RESEARCH
ACTIVITIES

CASE STUDY:
Chemical Physics
Chemical Physics Program

Origins

In the 1950's the cold war resulted in a large flow of money and resources to the DOD. Some of it was used for fundamental research because this activity was seen as having contributed to a victory in WWII therefore why not continue? The Department of the Navy had the opportunity to establish a scientific high pressure research center in the Washington area modeled after the equivalent of the Bureau of Standards in Holland. The Director the Dutch institution sought a laboratory in the United States that would continue the high pressure research in Holland and two men from the U.S. were sent to Holland to learn about the Dutch activities so that the laboratory could be duplicated on the Maryland campus. A building was constructed and equipment imported from Holland, all financed by the Navy. From the perspective of the University, this was a way to begin building worthwhile programs in the physical sciences. The Institute for Fluid Dynamics and Applied Mathematics was already in existence and the Physics Department under John Toll was entering the period of accelerated growth.

The building was named the Institute for Molecular Physics. It was integrated into the University structure through the Department of Chemistry with the Chairman of the Department of Chemistry also the Director of the Institute for Molecular Physics. This served the interests of the Chemistry Department, because at the time that department was viewed as weak with very little on-going research. To the extent that the research of the Institute could be connected to the Department of Chemistry, that department was seen to benefit. With sufficient funds available from the Department of the Navy, the Institute was viewed as a source rather than a sink for resources. Faculty in the Institute had academic positions, but no formal teaching requirements, though many taught in the Departments of Physics and Chemistry.

In time there was an independent Director of the Institute ending the arrangement whereby the Chairman of Chemistry also was Director of the Institute.

The Chemical Physics Program was established in the mid-60s in order to bring graduate students to the Institute. Once again the Department of Chemistry saw this as worthwhile, because students who would not normally come to the University of Maryland were applying to the new program, and some of them, once on campus, were finding their ways into the research programs of the faculty of the Chemistry Department.

The Institute for Molecular Physics was seen as a source of talented graduate students, scientists and administrators. The first independent director was chosen to be the head of a department at UMBC. The next director was hired away by Brown University and was replaced by J. Vanderslice who, after a few years, left to become the Chairman of the Department of Chemistry. R. Munn became director after Vanderslice, but soon also left for the Department of Chemistry. W. Benesch then became Director during the period of reorganization on campus and the Institute was combined with the Institute for Fluid Dynamics and Applied Mathematics to become IPST with a single director, J. Silverman. By then the Chemical Physics Program has shrunk from 10-12 active students to less than 5.
Jan Sengers, a long time member of the Institute for Molecular Physics sought to reactivate the program in the early 80’s. With energy and considerable diplomatic skill he reestablished the program and aggressively recruited students. Subsequent directors were Coplan from ‘85-’89, McIlrath from ‘89-’93, Williams from ‘93-’96 and Coplan from ’96-. Sengers is now Chairman of the Department of Chemical Engineering and McIlrath is in the Office of the Dean for Graduate Studies.

Program Structure

Both M.S. and Ph.D. degrees are offered, but the emphasis is on the Ph.D. Ordinarily the program was closely tied academically to the Department of Physics. Students took courses for 3 semesters; the courses included all but one of the suggested graduate courses for physics graduate students. In addition, students took most of the physical chemistry graduate courses. The qualifying examination at the end of the third semester had the same format as the Physics Qualifying Examination with questions on topics such as relativity, nuclear physics and particle physics replaced with chemical thermodynamics, statistical mechanics and quantum chemistry questions. A Chemical Physics Committee composed of faculty from the Departments of Chemistry, Physics and the Institute of Molecular Physics, later IPST, monitored the examination and set the passing levels. In addition to the two day written examination there was an oral examination for those passing the written part. Students were allowed to take the examination three times. Although a reasonable number of students passed the examination, the system was criticized because students could only begin research after three semesters in contrast to graduate students in Physics and Chemistry. Approximately five years ago the qualifying examination structure was changed to permit Chemical Physics students to take it after two semesters of course work. Some of the recommended physics courses were eliminated, and questions related to the courses removed from the examination. The examination could only be taken once and the oral portion of the examination was reserved for students with marginal grades on the written portion. This system seems to have functioned well. Students who are not qualified for the Ph.D. learn this after two semesters and can choose other careers rather than continuing to try to pass an examination that is too difficult for them. The qualified students begin their thesis research at the beginning of their second year at Maryland.

Expansion of Faculty

The resuscitation of the Chemical Physics Program by Sengers was accompanied by expansion of the number of faculty and the number of participating academic departments. The departments of Meteorology, Chemical Engineering, Electrical Engineering, and Mechanical Engineering joined the program. They committed no resources, but some of their faculty served on the Chemical Physics Committee and became thesis advisors for Chemical Physics Students.

Cooperative programs with NIH and NIST

In the 1980's two cooperative programs were established with NIH and NIST. The objective was to give students a wider choice of research opportunities and encourage closer ties between the Maryland faculty and government laboratories. There are Fellowships associated with the cooperative programs funded for two years by the
University and three years by the government laboratories. Success has been mixed. In some cases the students who have done research off campus have succeeded and have also made faculty at Maryland aware of research opportunities at the government laboratories. In other cases students have not received adequate supervision by the government scientists. There is some resentment at Maryland on the part of the faculty in seeing good students leave to do research off campus.

Other benefits are specialized courses taught at Maryland by government scientists and seminars given by them regularly each semester. One of the goals of the cooperative programs was that they serve as models for the establishment of larger programs between the larger departments and nearby government laboratories. There are now several years of useful experience to be drawn upon.

Successes and Limitations

The Chemical Physics program does provide wide research experience for the students. Faculty collaborations have increased and both faculty and students are more aware of research opportunities at NIH and NIST. All the courses are already on the books and no additional resources have been required. Special courses taught by government scientists are without cost to the University. The limitations are supervision of the students, and no fixed stable budget for staff, recruiting, advertising, and teaching assistants. IPST has provided a half-time secretary and some funds for recruiting and advertising. IPST provides a small office for the director and a room with separate desks for first year graduate students. Teaching assistants have come from the Departments of Physics and Chemistry, and there remains an atmosphere of cooperation. University Fellowships provide another source of support for incoming graduate students, but the small stipend has to be supplemented by at least a half teaching assistantship in order to be competitive with other universities.

The Chemical Physics Program has succeeded here so far because it serves the interests of the faculty and departments by attracting good students who do research with the faculty. The emphasis on both physics and chemistry is attractive to students seeking a broad background, and the cooperative arrangements with NIH and NIST provide expanded research opportunities. There are now fewer students in the physical sciences than in the 70's, 80's and it is becoming increasingly difficult to recruit the students of the quality we need. Foreign students compose approximately 50% of the incoming classes. They typically perform better in their course work and on the qualifying examination than American students.

Some Statistics:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time students:</td>
<td>29</td>
</tr>
<tr>
<td>Half-time students:</td>
<td>1</td>
</tr>
<tr>
<td>Participating Maryland Faculty:</td>
<td>42</td>
</tr>
<tr>
<td>NIH scientists associated with the cooperative program:</td>
<td>26</td>
</tr>
<tr>
<td>NIST scientists associated with the cooperative program:</td>
<td>28</td>
</tr>
<tr>
<td>Adjunct faculty from NIH:</td>
<td>1</td>
</tr>
<tr>
<td>Adjunct faculty from NIST:</td>
<td>1</td>
</tr>
</tbody>
</table>
APPENDIX F-D

MIDDLE STATES REVIEW:

TASK FORCE ON
PROMOTING INTERDISCIPLINARY PROGRAMS AND RESEARCH
ACTIVITIES

CASE STUDY:
Institute for Systems Research
Since its founding in 1985, the Institute for Systems Research (ISR) has become an acknowledged leader in the integrated design for control of complex engineering systems. It has linked 10 departments at the University of Maryland and Harvard University in a program that is unparalleled in its cross-disciplinary approach to research and education. In eight years, over 100 companies have benefited from participation in ISR programs, and 16 internationally renowned research organizations have established formal exchange agreements with the ISR.

In 1992, the state of Maryland recognized the unique contribution of the ISR by designating it a permanent institute of the University of Maryland and renewing its financial commitment to the Institute. The ISR has attracted the highest caliber of faculty and students, including 11 NSF PYIs, 11 Fellows of IEEE, ASME, or AIChE, and a member of the National Academy of Engineering.

ISR Vision - A founding Purpose and Driving Force. The vision of the Institute is global leadership in generating fundamental knowledge and technologies of integrated design for control of complex engineering systems. By combining advanced technologies into better systems and products, the Institute promotes the competitiveness of U.S. industry. This is particularly essential for the nation during this period of defense conversion and economic restructuring.

Since 1985, the ISR vision has evolved from one concerned with computer-aided tools for the design of automation and information processing systems to its current broader concern with the integrated design for control of complex engineering systems that have control and communication systems as subsystems. A major objective of the ISR’s strategic plan is the transfer of knowledge and methods across strategic thrust areas, a process that has evolved from concentration on projects within a single thrust area, to projects and testbeds that cut across thrust areas. The ISR methodically considered which are the most important industrial problems in which systems advances are crucial, and to which the ISR can make a unique contribution. These interdisciplinary group projects have created opportunities for researchers to work together towards achieving key strategic objectives, in areas such as intelligent robotics and control, real-time signal processing and understanding, and computer integrated manufacturing.

Cutting-Edge Research. Eight constituent and five affiliated state-of-the-art laboratories, including Intelligent Servo Systems, Systems Integration, VLSI Systems, Communication and Signal Processing, Computer Aided Control Systems Engineering, Computer Integrated Manufacturing and Neural Systems, facilitate cross-disciplinary research. Within both universities, undergraduate and graduate students collaborate with post-doctoral fellows and leading faculty researchers on innovating that are directly applicable to industry. In these laboratories, algorithm developers have worked side by side with chip designers to develop sophisticated speech processing and recognition algorithms on micro-electronic chips. Faculty and students in sensor design, path planning, and control architecture collaborated in the design of dextrous robotic manipulators with vision, tactile, and force sensors. Computer science and manufacturing faculty have worked together in projects concerning the information management of flexibly automated factories. In addition, ISR researchers have
developed new analytical methodologies for multibody mechanical systems and have developed new analog models and methods that form the basis for a new theory of hybrid analog/digital systems.

Research and technology Transfer Highlights. Industry has been a principal beneficiary of new technologies and processes produced at ISR.

- Intel, Texaco, General Electric Westinghouse and Grumman are among more than 200 academic and industrial sites now using IRS’S CONSOL and FSQP nonlinear optimization software packages.

- General Electric and United Technologies employ the ISR’s innovative control techniques based on bifurcations of nonlinear systems in their axial compressor engine programs; the Electric Power Research Institute uses the same technology to control power system voltage collapse.

- Loral uses an ISR system for compression and storage of satellite imagery from NASA’s EOS satellite of which the design, analysis, simulation, and construction were facilitated by ISR advances in very large scale integration (VLSI) design, combined with high performance, low complexity structured vector quantization techniques.

- Westinghouse uses collaboratively developed manufacturing software for cycle-time reduction, with particular application to the company’s optimal facility design for antenna assembly, and for producibility, cost, and quality evaluation of electromechanical assemblies.

- Exxon Chemical develops new, high-quality polymer products using models and techniques collaboratively formulated through research that used a pilot plant and actual plant data to integrate first principles and neural network modeling for control.

- Digital Equipment Corporation is using jointly developed control technology for the positioning of magnetic disk read heads; a joint patent application is pending.

- GE is using vibratory motor technology jointly patented with ISR researchers for jet engine control.

Comprehensive Education Programs. The ISR implemented an education program that spans pre-college through post-graduate levels. An intensive outreach program attracts high school students, minorities and women into engineering. The first successful NSF Young Scholars program (a summer program for pre-12th grade students) in an Engineering Research Center was conducted in 1992 and repeated in 1993. The NSF-sponsored Research Experiences for Undergraduates program has attracted 67 students and the Undergraduate Research Participation Awards program has supported 42 students, all of whom participated in ISR research. The ISR has graduated 212 M.S. students and 135 Ph.D.s over eight years. A new M.S. in Systems Engineering program, introduced in 1987 and developed jointly with industry, has graduated 15 students and currently has 39 students enrolled.
Participation in ISR education initiatives transfer lessons from Institute’s cross-disciplinary environment to both academia and industry. The ISR’s emphasis on teamwork and hands-on experience in research has been introduced into the freshman engineering curriculum at both Harvard and the University of Maryland. In addition, the Institute has created a modern computing and laboratory environment for engineering design and systems synthesis.

The Institute contributes in many ways to the future of academic excellence in systems sciences. ISR faculty have published 30 books in the field. The Engineering/Mathematics Training Institute, held for two summers at the ISR, has given 40 teachers of high school mathematics and science tools to spark the interest of their students in the field of engineering. ISR faculty have modified or developed 104 engineering courses, including a freshman engineering design course at Harvard. In addition, ISR faculty participated in the formulation of and continues its participation in the Engineering Coalition of Schools for Excellence and Leadership (ECSEL), which brings together engineering education programs of major universities and historically black colleges and universities. Last year, the Institute conducted more than 50 cross-disciplinary seminars and colloquia and hosted eight workshops and conferences for industry and academia. In addition, the Institute initiated the ISR Distance Education Network, a short course program to take relevant training directly to the workplace.

Diverse Faculty Initiatives. The ISR serves as an instrument of change on both campuses, particularly concerning attitudes about cross-disciplinary research, education, and interaction with industry. It has established a model for cross-disciplinary research at the University of Maryland and Harvard University. Faculty members developed the CALCE Electronic Packaging Research Center (an NSF State/Industry University Cooperative Research Center), and the Center for Satellite and Hybrid Communication Networks (a NASA Center for the Commercial Development of Space). Each includes a consortium of companies; the latter includes other universities as well. ISR faculty were awarded the Air Force Office of Scientific Research-funded University Research Initiative (URI) in Control of Complex Multibody Spacecraft and are key members of the Army Research Office URI in Smart Structures Technology. They have established two Cooperative Research and Development Agreements: one with the Army, in the development of active stall controllers for axial/centrifugal flow compressors, and the other with National Institute of Standards and Technology, in the machining of ceramic parts. The ISR provided leadership at the University of Maryland in forming other university-industry coalitions, including an Advanced Research Projects Agency consortium in the manufacturing of smart materials. ISR faculty members at Harvard University are collaborating in an Office of Naval Research University Research Institute (URI) on tactile sensing with Stanford University researchers, and an Army Research Office URI on intelligent systems with faculty from Brown University and the Massachusetts Institute of Technology.

Strong Industrial Collaboration Program. The ISR’s innovative and broad industrial collaboration program enhances interaction between the academic, industrial, and government research communities. Fifty-six companies currently participate in the ISR’s industrial Sponsorship Program to collaboration in joint research projects. In 1990, Martin Marietta Corporation contributed the first
permanent endowment to the ISR - the $1.5 million Chair in Systems Engineering.

The goals of the ISR’s industrial collaboration program are to engage industry in the strategic planning, research, education, and outreach of the ISR; to enhance industrial competitiveness through rapid technology transfer; to work with industry to define its technological needs to guide research and education programs; to conduct collaborative research; and to give students direct participation in industrial research projects. These goals are achieved by engaging industry in every level of activity in the organization, and, by doing so, promoting the rapid exchange of information between the ISR and those industries. The ISR encourages industrial visitors to the ISR, faculty and student visitors to industry, bi-directional strategic research planning, joint use of laboratories, and fellowship programs with industry. In addition, the Institute offers colloquia, seminars, and intensive short courses and workshops.

Sustained Momentum Via Resource Management. The ISR’s structure as an NSF Engineering Research Center and the significant investment of resources by the University of Maryland and Harvard University are critical factors in the Institute’s success. Recruitment of outstanding students and faculty further bolsters ISR’s quality research and education programs. University of Maryland support in terms of permanent line-item funding and space gives the ISR the institutional stability that makes it “home” to faculty, staff, and students.

The ISR occupies 27,000 square feet of office and laboratory space at the University of Maryland and 4,000 square feet of space at Harvard. It is the institutional base for faculty and students from 10 departments who enjoy frequent contact within this diverse community. ISR students are assigned to departments who enjoy frequent contact within this diverse community. ISR students are assigned to interdisciplinary offices to encourage further contact. Thirty-nine faculty have joint appointments in the ISR, adding to a strong sense of commitment to the Institute’s success and promoting a strong sense of faculty “ownership” and commonality of purpose. It is the existence of this infrastructure that made possible the smooth and effective transition to a new director of the ISR in 1991.
THE EDUCATIONAL MISSION OF A PUBLIC RESEARCH UNIVERSITY:
THE MIDDLE STATES SELF-STUDY

APPENDIX H

Report of Task Force on
A VISION FOR FACULTY AND STAFF IN THE 21st CENTURY
RESPONDING TO NEW OPPORTUNITIES AND CHALLENGES

August 1996
Submitted by:

Marilyn Berman, Chair
George Dieter
Susan Frazier
Sanjeev Gandhi
James Harris
Susan Komives
Jo Paoletti
Janet Schmidt
Sylvia Stewart

THE UNIVERSITY OF MARYLAND AT COLLEGE PARK
**Table of Contents for Appendix H**

I. Introduction ................................................................. 1
   A. Problem Statement ................................................. 1
   B. Team Charter .................................................. 1
   C. Work Plan ............................................. 1
   D. Resource Group .......................................... 2
   E. Conceptual Framework ...................................... 2

II. An Adaptable Work Force of Faculty and Staff ...................... 3

III. Collaborative Work and Learning Community ........................ 4

IV. Move From A Teaching Paradigm To A Learning Paradigm ............ 6

V. Connection To Community ............................................. 7

VI. Diversity ............................................................... 8

VII. Rewarding What We Value ......................................... 9

VIII. Bibliography .......................................................... 11

IX. Appendices .................................................................. 12

   H-A. Trends, Assumptions, and Implications for UMCP Employees ................. 12
   H-B. Middle States Self Study Team on a Vision for Faculty and Staff in the 21st Century: Responding to New Opportunities and Challenges ......................................................... 15
   H-C. UMCP Benefit Comparison with Peer and Aspirational Institutions .............. 23
   H-D. Summary of Data Appendix ..................................... 29
Appendix H

I. Introduction

A. Problem Statement

If we are to make progress in advancing the educational and research missions of the University of Maryland at College Park, it is important that we develop strategies to revitalize all faculty, staff and graduate assistants to meet the new challenges and opportunities in the next decade. The team dedicated itself to providing creative suggestions to achieve that end.

B. Team Charter

The scope of the team’s charter was defined by five broad questions as follows:

- What “work” by faculty and staff do we particularly value in light of the new campus strategy?
- In what ways can we best reward that which we value?
- What are the best strategies to enable faculty and staff to achieve the goals of the university?
- Given the diverse work force (present and future) of the state of Maryland, how do we recognize, appreciate, and ensure the full contributions of all employees?
- What can be done to increase the engagement of faculty and staff with the university?

C. Work Plan

The questions posed above were developed by brainstorming about the opportunities and challenges facing faculty and staff and mapping these into the ten questions posed to the team by the Self-Study Executive Committee. The questions were organized around the areas of recruitment/Development/Retention/Rewards. The Employee categories that were considered in this study are: faculty (all categories), associate staff, classified staff, and graduate assistants.

The team met every Monday, from 3:30-5:30 p.m. from March 15-June 10, 1996. The team met with a large resource group four times during the process of developing the report. The resource group was asked to respond to the team’s charter, and to react to the draft outlines of the report as they were developed by the team members. Each team member had a writing assignment which related to the trends, assumptions, and recommendations made by the team in consultation with the resource group (see Appendix H-A). The team met with Dr. Richard Chait to elicit his views on the team’s charter. Current literature was received which pertained to our task; we read the Middle States Studies done five and 10 years ago; read and collated the many “diversity reports” produced on campus prior to the self-study (See Appendix H-B); compiled a UMCP Benefit Comparison with Peer and Aspirational Peers (See...
Appendix H-C); and reviewed a Ten Year Work Force Comparison (See Appendix H-D). The sources used are contained in the bibliography at the end of the report.

D. Resource Group

The Resource Group was a diverse group composed of faculty and staff. We had no participation from graduate students although they were invited to attend. A list of the resource group members is appended to this document.

E. Conceptual Framework

The team and the resource group identified six major trends that the university will need to address in the 21st century. These are, 1- rapid change, and the need to be a quickly responding system, 2-the shift from individualistic work to teamwork, 3-a paradigm shift from a teaching to a learning environment, 4-an increase in the need for public accountability, 5-changing demographics, and 6-a changing reward structure. By viewing these six major trends, the team in consultation with the resource group identified six grounding assumptions as follows; 1-we need to maintain an adaptable work force of faculty and staff, 2-we need to become a collaborative learning and work environment, 3-we need to place a greater emphasis on where and how students learn, 4- we need to be connected to multiple communities, both internal and external, 5- we need to embrace diversity in all its forms, because it enriches work and learning, and 6- we need to reward what we value (See Appendix H-A).

The team and the resource group developed between 4-7 recommendations to respond to each assumption and changing trend. They include such recommendations as innovating with job-sharing and flextime, and flexplace for faculty and staff, training, team building, leadership development, job rotation programs, and internal sabbaticals, developing supportive technology for learning and different reward structures. These and the others are expanded upon in the report.

The adaptable university, and one where faculty and staff, can function and perform in excellence, must continually identify trends and changes in the world, country, state, among students, and in higher education in general. The campus must continually explore how all campus employees (i.e. faculty, staff, graduate students, student workers) can reflect quality, flexibility, and collaboration in these rapidly changing times. Changing expectations must be clearly grounded in shared values and assumptions. They are heavily influenced by new ways of working facilitated by technology. The university must also be accountable to all of its constituents.

II. An Adaptable Work Force of Faculty and Staff

UMCP should develop a comprehensive human resource policy. This policy should establish principles that will guide university practices. It should address such aspects as the commitment to the current work force of faculty and staff in the event of downsizing or outsourcing. It should address commitments to internal placement and services for out placement. It would establish principles on diversity in the work force of faculty and staff. These principles should also include statements of the nature of campus community, individual and team excellence, maximum flexibility in all units, commitment to training and development, and a commitment to involving the voice of all groups of faculty and staff in university work.
Recommendations:

1. UMCP should invest in the development and renewal of the work force of faculty and staff. We recommend that the Personnel Office expand its functions to become a Human Resource office with expansion of training, development, and renewal programs for all types of staffing. We recommend further study on the development of multiple career paths for faculty and staff. There should be professional development expectations of all levels of staff and faculty. Recruitment, selection, and development policies should advance flexibility in faculty and staff, for example, staff should be able to work on more than one computer system, faculty should demonstrate the ability to make cross disciplinary connections with their discipline, and administrative staff should be cross-trained in diverse functions.

2. UMCP should move toward a philosophy of enriching faculty and staff talent in diverse ways. Staff and faculty should be involved in university-wide work; cross functional teams will bring the perspectives of varying roles toward common problems. We recommend the consideration of such practices as internal consulting teams (e.g. computer applications teams that could include advanced students). We recommend the university advocate continued strong international presence through attention to such external barriers as restrictions on H-1 visas and more creative use of internet links to other countries. We should innovate how employees can demonstrate their learning or skills through experience when being hired or promoted (e.g. CLEP, portfolios).

3. UMCP should be proactive regarding the enhanced role of technology in administrative and educational processes. It should include commitments to technological support for faculty including the use of technology for instruction and for staff in modern business processes. The campus should have 24 hour access to electronic processes (e.g. electronic grading, email, various on-line forms).

4. UMCP should establish a mechanism for reviewing the contingent work force issue, and policies and practices on the balance and role of a contingent work force of faculty and staff. We need to recognize that the campus values the use of local experts and the intellectual talent pool, but is uncomfortable with the excessive use of a contingent work force of faculty and staff. We need to establish a statement addressing this balance. We recommend that a special committee address the issue of graduate assistants, who are the largest contingent group. Where there are contractual and part-time staff and faculty, we recommend exploring ways to facilitate more comprehensive involvement in their employing units particularly for long term contractual employees. We recommend campus-wide encouragement of joint appointments, shared jobs, flextime and flexplace work and other strategies that support adaptability, beyond the current practice.

5. Provide leave opportunities for staff (for education, university service, or professional development).

III. Collaborative Work and Learning Community

The strength of the university traditionally has been its highly knowledgeable and dedicated work force of faculty and staff. In the faculty ranks we recognize the professor who wins awards and brings in grants. We value highly those activities
which enhance the reputation of the institution. In the staff we identify and reward major contributors, often those who gain a campus-wide reputation for service. Moreover, with students we emphasize almost exclusively individual performance to the exclusion of active learning in teams. While the importance to the university of the high-performing individual will not diminish in the near future, we have come to realize that the pendulum has swung too far, that in our glorification of the high performers we have neglected the importance of high performing teams. Much of the growing emphasis on teams comes from the transformations in work environment that have taken place in industry and the service sector as a result of continuous quality improvement activities, and on those pioneering institutions of higher learning that have adopted concepts of collaborative learning.

Recommendations:

1. Coordinate the resources for providing training in collaborative working and learning. A growth in the number of faculty and staff who are comfortable working in a collaborative mode will not take place unless many more persons are trained in these methods. Expertise exists in various places, e.g. Office for CQI, College of Education, Employee Relations Training Office, but no one office has the resources needed for the task. The first step is to identify individuals with expertise, then to create a campus network of trainers, much as has been done in the area of sexual harassment training.

2. Create strategies for greater engagement of academic units in collaborative working and learning. Top campus administration must be more pro-active to help colleges and departments to understand the benefits of greater involvement in collaborative activities and team-driven problem solving methods. One important step to achieving this goal is better dissemination and education about the lessons learned in collaborative working and learning. Examples are the work of the Lilly Fellows, and the team process that created the freshman design course ENES100.

3. Review the campus committee structure with the objective of rationalizing faculty and staff work load and encouraging wider involvement in team activities. A clear impediment to wide-scale adoption of collaborative working and learning is the perception that there is a major learning curve required by an already overworked faculty and staff. As a first step toward removing this barrier the campus should catalog and review all committees with the view of identifying duplication and overlap and setting clear lines of responsibility and expectations.

4. Develop a campus program of leadership training. Three major opportunities come to mind: leadership training for new academic chairs and administrative department heads; and an executive leadership forum, a year long program of seminars and learning for established campus management; and leadership opportunities for emerging faculty and staff leaders.

5. Develop an ongoing program of rewards and recognition. Team driven activity will not grow without the incorporation of appropriate recognition and rewards.

6. Improve the facilities for group interactions. Meeting rooms must have simple CQI tools readily available. Several rooms should be equipped for point-to-point TV
across campus and between campuses of the System. The use of computer groupware should be expanded.

7. Begin some experiments with self-managed work teams. This activity empowers employees to plan and carry out their work without direct supervision. The libraries and physical plant are good areas for experimentation. Such a method of operation offers potential productivity improvements.

IV. Move From A Teaching Paradigm To A Learning Paradigm

One of the more persistent themes in higher education literature in recent years has been the contention that universities should be experiencing a shift from an emphasis on teaching to an emphasis on learning, particularly increasing active learning and developing new ways to assess student learning. The faculty in our resource group concurred with the importance of this shift, while pointing out that on a campus this size, traditional lectures are not likely to ever disappear. In addition, employees other than regular faculty, who are not usually considered "teachers", made it clear in our discussions that many are actively involved in the campus' educational enterprise, and many more would welcome the opportunity to become involved.

Recommendations:

1. Evaluate the current status of Student Learning Outcome Assessment, involving all campus employee constituencies, with the dual goals of improving the system and identifying ways to further involve faculty, staff and student employees in the student learning process. Utilize the recommendations of the task force on Assessing Student Learning Outcomes, proposing an action plan which emphasizes the role of faculty in developing both an outcomes assessment system and improving student learning as measured by that system. The budget crisis of the early 1990's greatly restricted the implementation of the recommendations, and their impact has yet to be felt by most faculty and students.

2. Develop ways to create a more caring environment which supports and encourages student learning, drawing upon all categories of university employees. In particular, faculty and staff who routinely interact with students should be well-informed about the academic and human development resources available at UMCP. This will require convenient and efficient access to information as well as training in helping students navigate through a host of educational resources.

3. Develop ways to increase the involvement of non-instructional employees in student learning, including retired faculty and staff. Examples and possibilities include the Advise-5 program, being part of a team of EDCP 108 instructors, speaking to a class or student group, or acting as mentors, or supervisors in the work place.

4. Evaluate the university as a setting for learning-centered instruction, examining both human resources and the physical environment. Provide training and support to help faculty, staff and graduate assistants promote student learning in the classroom and beyond. Identify and renovate classrooms and labs which have design problems which interfere with learning. Ensure that everyone who teaches has access to the necessary tools (from copy machines to video conferencing) to do the job well.
V. Connection To Community

We must remain committed to our many roles as a Land Grant institution. It is important for the university to be mindful of public accountability. We need to continually interact and educate the public about the role of public education, with the realization that we must stay connected to our multiple communities beginning with our own campus community. The recommendations in this section relate to “community” in the global sense, and are not limited to the local community or to the state of Maryland. We need to bring the outside community to us, as well as reaching out.

Recommendations:

1. Communicate better the university role in public education, service and research, and engage in a more effective public relations effort. Devote more resources to getting our message out to our publics including our own campus community.

2. Continue to involve our faculty and staff in identifying who our ever changing constituents are, and view this constituent base globally rather than locally.

3. Encourage and allow staff to participate in service activities connected with the internal campus community. Examples of these are the Adult Basic Education Program and English as a Second Language, which would flourish if campus volunteers worked with staff who need help in acquiring English skills. We need to implement the policy which allows staff release time to serve on institutional committee work, as service to the university. However, we need to implement this policy in such ways as to ensure that supervisors are flexible, and that the staff who do not serve on committees do not feel burdened as a consequence.

4. Recognize the volunteer efforts of our faculty and staff, and the volunteers who work at the university. Expand the Retired Volunteers Program. Expand External Advisory Groups.

5. Place greater emphasis in service learning in the community. We need to place importance on the value of service to our multiple communities and the role this plays in creating a dynamic learning environment. We need to view service as a part of work, and promote work teams in the community. The team of faculty and students and the Women in Engineering Program who teach and mentor at Lakeland Public School is an example of this kind of activity. We need to find ways to do not only outreach, but to bring communities to the university. A good example of this is Saul Sosnowski’s outreach to the Latino community which results in the enrollment of students to the university from this community. We need to reward partnership programs with businesses, and public institutions and the faculty and staff who develop them.

VI. Diversity

Efforts to mentor and support a diverse community of faculty, students, and staff must be ongoing. Achieving diversity in its fullest sense (e.g., learning styles, ethnicity, race, gender, age, sexual orientation, disability, etc.) is vital to the continued development of a dynamic work force of faculty and staff at UMCP in the 21st
In recruiting, developing, retaining, and rewarding faculty and staff at all levels, we must observe the principles of equity and reflect the institution's commitment to diversity. These efforts enable us to recruit and retain students, both undergraduate and graduate, and provide diverse teams of faculty and staff who make multidimensional and innovative decisions. A comfortable and supportive environment attracts and retains talented people, whether they are faculty, staff, or students. In the spirit of this commitment to diversity, we make the following recommendations:

Recommendations:

1. Increase career development and/or internships to increase access for under-represented or other at-risk (e.g., under-educated) groups.

2. Facilitate explanations of employee rights for those with communication handicaps at the onset of employment. Articulate expectations and requirements for faculty and staff and reward that performance. Fund the Performance Review and Development program.

3. Survey faculty and staff on a regular basis (every two years) to assess campus climate regarding diversity, benefits, compensation, work satisfaction, etc., and publish these results to the campus with a commitment to improve shortcomings.

4. Continue to provide diversity training, such as race relations and sexual harassment, etc. and hold multi-racial, multi-cultural events.

5. Reward those units who succeed in creating an effective diverse environment.

6. Shift emphasis from issuing new reports to evaluating and creating realistic implementation plans (See Appendix H-B).

There have been numerous reports, such as "Access Is Not Enough...", "Asian, Hispanic, and Native American Task Force", etc. (see complete listing in Bibliography), which made recommendations to enhance the recruitment, retention, and rewarding of faculty and staff for carrying forth our diversity agenda. While progress has been made within the last 10 years, there is still a lot to be done. There is a significant undercurrent that not enough has been done to implement the numerous recommendations that have been made. We have included a chart summarizing the major recommendations of these reports and have chosen a few to highlight the needs in this area.

VII. Rewarding What We Value

The section devoted to Faculty and Staff is new to the current Middle States Self-Study, at least by comparison to the 1991-1992 study, reflecting a more focused concern for the workplace. But it is neither a study of the new pay structure nor of the new workload requirements. We recommend that both of those new systems be kept in mind in considering the following. Likewise, we recognize that the university has been rewarding its employees in a wide variety of ways for some time (See Appendix H-C which reviews UMCP Benefits with that of our aspirational peers). It is incumbent on the university to find suitable rewards both to praise what is being
accomplished as well as to stimulate further achievement.

Recommendations:

1. The university should institute new awards, both symbolic and monetary, to recognize excellence in individual, group and team performance, especially in areas singled out by the university community as key to its future. These awards should recognize new forms of work and creativity.

2. The university should inventory and make known employee needs common to both faculty, staff, and the TA/GA/RAs. As an example of possible ventures, we recommend attention to Child and Elder Care, the total compensation package (including tuition remission for dependents), and bonuses.

3. Expand staff and faculty participation and input into the planning and oversight aspects of its operating structure and culture at all significant levels. Any changes in the planning process should be communicated to the campus community.

4. The university should further encourage and support the education and training of all employees in order to produce the best possible performance and a high quality of life.

5. In all of the above, the various units within the university, working collaboratively with faculty, staff and student employees, should clearly define what it means by excellence. Progress has been made to address this issue at the faculty level, for example, the Distinguished Scholar Teacher Award, but much remains to be done at the staff and GA levels. This is a difficult issue and we recommend that the CQI Council revitalize this process.

6. The campus needs to understand the negative consequences of the shift from a 35 1/2 to 40 hour work week on staff morale. The Governors Executive Order establishing the 40 hour work week without additional compensation lingers as a festering sore. The last Middle States report recommended revisiting this issue, and we are making the same recommendation.

While we recognize that cost will play a role in implementing some or all of the above, we submit that investment in these areas will pay healthy dividends in productivity as well as in a higher quality of life and work.
VIII. Bibliography


Chait, Richard, Team Conversation, March 15, 1996.


UMCP, *Campus Strategic Plan*, Draft, April 1996.


APPENDIX H-A

MIDDLE STATES REVIEW:

TASK FORCE ON
A VISION FOR FACULTY AND STAFF IN THE 21ST CENTURY
RESPONDING TO NEW OPPORTUNITIES AND CHALLENGES

TRENDS, ASSUMPTIONS, AND IMPLICATIONS FOR
UMCP EMPLOYEES
## ASSUMPTIONS, AND IMPLICATIONS FOR UMCP EMPLOYEES

The adaptable university must continually identify trends and changes in the world, country, state, among students, and in higher education in general. The campus must continually explore how all campus employees (i.e., faculty, staff, graduate students, student workers) can reflect quality, flexibility, and collaboration in these rapidly changing times. Changing expectations must be clearly grounded in shared values and assumptions. They are heavily influenced by new ways of working facilitated by technology. Accountability measures will be recommended in each category.

<table>
<thead>
<tr>
<th>Trends/changing conditions</th>
<th>Grounding assumptions</th>
<th>Applications/implications for employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>rapid change, expansion</td>
<td>A. Maintaining an adaptable work force</td>
<td>Clear policy statement by the University recognizing the general discomfort with excessive use of contingent work force, contractual and part-time employees as a tool to address short-term and specific campus needs.</td>
</tr>
<tr>
<td>knowledge, pace of</td>
<td></td>
<td>Encourage joint appointments</td>
</tr>
<tr>
<td>technological change</td>
<td></td>
<td>Tap local experts and intellectual pool to enrich university curriculum</td>
</tr>
<tr>
<td>need to be a quickly</td>
<td></td>
<td>Innovate with job sharing, flextime, flexplace</td>
</tr>
<tr>
<td>responding system</td>
<td></td>
<td>Encourage integration of long-term contractual employees through benefits, shared governance, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support work with child care/elder care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide computer equipment for home-work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implement different faculty career paths (see Scholarship Reconsidered)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Promote intentional staff development expectations for all categories of staff positions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use technology to stay flexible (24 hour access, e.g., electronic grading, on-line forms)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implement linkages in international collaborative scholarship</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statement concerning international workers and scholars (e.g., H1 Visas, taxing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create cyberspace professorships. Bring international/national quality into classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work environments through interactive technology, develop student apprentice program with emphasis in technological training leading to campus employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meaningful involvement of all staff in university-wide work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Understand and address differing needs of work force (i.e., longevity, new training, personal goals)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovate in how employees can demonstrate learning through experience for hiring and promotions (CLEP, portfolios)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create policy &amp; commitment to in-placement of personnel if current work is being eliminated (provide retraining or help with outplacement)</td>
</tr>
<tr>
<td>moving from loosely coupled</td>
<td>B. Become a collaborative learning and work community</td>
<td>Continued emphasis on individual initiative</td>
</tr>
<tr>
<td>functional silos that do</td>
<td></td>
<td>Promote/reward cross functional work team structures, promote/reward interdisciplinary teaching and research</td>
</tr>
<tr>
<td>individualistic work and</td>
<td></td>
<td>Sponsor institutes around social issues (using flexteams)</td>
</tr>
<tr>
<td>are not connected to the</td>
<td></td>
<td>Create job rotation programs/internal sabbaticals</td>
</tr>
<tr>
<td>whole</td>
<td></td>
<td>Encourage and reward cross unit innovation and entrepreneurial actions</td>
</tr>
</tbody>
</table>

*(continued)*
<table>
<thead>
<tr>
<th>Trends/changing conditions</th>
<th>Grounding assumptions</th>
<th>Applications/implications for employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>shifting from teaching to learning</td>
<td>C. Emphasis on where and how students learn</td>
<td>Support faculty in innovative learning environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create/support partnerships between student development educators and teaching faculty (e.g., value experiential learning, facilitated collaborative learning, create intentional learning communities)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support continuing faculty and staff learning, development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modify student work supervision to emphasize learning through peers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovate in GA training/mentoring/supervision (e.g., TAs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Value talents/contributions of all workers (e.g., speaking partners program linking bilingual staff with language students)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovate in assessment measures for learning that view the role of the broader campus environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ensure work environments support teaching/learning through both technology and facilities (e.g., access to photocopying, classroom audiovisual aids, advanced technology)</td>
</tr>
<tr>
<td>increase in forms of public accountability, role of land grant university in the state, continual need to educate the public about role of higher education, increased emphasis in service learning/community</td>
<td>D. Be connected to many communities, not isolated from them</td>
<td>Better communication of the University role, efforts in community: better PR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Examine outreach and service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish advisory boards and local partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Give released time (particularly staff) for service to campus community</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identify constituents, not essentially geographically local</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reward partnership programs (e.g., business/education support related service activities)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service as part of work, promote work unit community involvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recognize volunteer services</td>
</tr>
<tr>
<td>demographics changing, must model the benefit of diverse ideas, approaches, leading to common purpose</td>
<td>E. Diversity in all forms enriches work and learning</td>
<td>Commit to recruitment, retention, staff development, and rewards of diverse workers, recognize higher degree of campus diversity as strength</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create mentor/support systems for at-risk employees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recognize diversity in its broad, encompassing form</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sponsor periodic studies of campus work climate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Design staff development for all learning styles</td>
</tr>
<tr>
<td>norms and rewards based on conventional education culture needs to be adapted for tomorrow’s institution</td>
<td>F. Reward what we value</td>
<td>Monetary and non-monetary rewards, support and reward life-long learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Include flexibility as an essential criterion in hiring, promotion systems (e.g., tenure) and evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create team rewards (not just individual rewards)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support and reward quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Match benefits to employee needs</td>
</tr>
</tbody>
</table>
APPENDIX H-B

MIDDLE STATES REVIEW:

TASK FORCE ON
A VISION FOR FACULTY AND STAFF IN THE 21ST CENTURY
RESPONDING TO NEW OPPORTUNITIES AND CHALLENGES

MIDDLE STATES SELF STUDY TEAM ON A VISION
FOR FACULTY AND STAFF IN THE 21ST CENTURY:
RESPONDING TO NEW OPPORTUNITIES AND CHALLENGES
Middle States Self Study Team on a Vision for Faculty and Staff in the 21st Century:
Responding to New Opportunities and Challenges

Q1 - What can be done to increase the engagement of faculty and staff with the University?
Q2 - What “work” by faculty and staff do we particularly value in light of the new campus strategy?
Q3 - In what ways can we best reward that which we value?
Q4 - What are the best strategies to enable faculty and staff to achieve the goals of the University?
Q5 - Given the diverse workforce (present and future) of the state of Maryland, how do we recognize, appreciate, and ensure the full contributions of all employees?
<table>
<thead>
<tr>
<th><strong>Recruit</strong></th>
<th><strong>Develop</strong></th>
<th><strong>Retain</strong></th>
<th><strong>Reward</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q1</strong></td>
<td><strong>Role models/successful mentoring</strong>&lt;br&gt;Get faculty and staff to believe in and accept institutional goals and values&lt;br&gt;Create opportunities for professional growth (faculty &amp; staff)&lt;br&gt;Institute policies to ensure the appointment of Asian, Hispanic, &amp; Native American to key academic committees&lt;br&gt;Create an organizational structure to support and highlight our faculty’s expertise in public-policy issues of state, national &amp; global significance</td>
<td><strong>Role models/successful mentoring</strong>&lt;br&gt;Collegiality&lt;br&gt;Satisfaction with salary &amp; working conditions</td>
<td><strong>Mentoring</strong>&lt;br&gt;Activities&lt;br&gt;Q2 Chairs/supervisors should articulate expectations and requirements and reward performance&lt;br&gt;Exit Interviews&lt;br&gt;Development of international resources and centers&lt;br&gt;Involvement with minority/equity issues on campus&lt;br&gt;Small faculty groups to discuss effective teaching methods&lt;br&gt;Improve quality &amp; amount of faculty/student interaction and reward it&lt;br&gt;Develop principles of good advising&lt;br&gt;Mentoring Excellence in research and instruction&lt;br&gt;Research results available for use/benefit in State of Maryland&lt;br&gt;Interdisciplinary</td>
</tr>
<tr>
<td>Small group discussions/workshops (deans, chairs, tenured fac.) Re: ways to recruit/support minority fac. &amp; staff&lt;br&gt;Establish a Black Visiting Professorship Program&lt;br&gt;Establish policies &amp; practices in each college to support black, untenured Faculty -- provide decreased teaching &amp; service responsibilities; allow adequate time for research/publications&lt;br&gt;Increase the pool line proform 6 - 10 lines annually&lt;br&gt;Establish a Center/Minority Scholarship Research and Service - provide funds to advance the research and Scholarship by black faculty, staff, and students and coordinate service projects in cooperation with local citizens and organizations&lt;br&gt;Exit interviews</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruit</td>
<td>Develop</td>
<td>Retain</td>
<td>Reward</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Q3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive graduate fellowship/TA stipends</td>
<td></td>
<td></td>
<td>Credit teaching, advising, service &amp; involvement in equity issues within promotion &amp; tenure system</td>
</tr>
<tr>
<td>Progress made by supervisors in creating an atmosphere of racial &amp; ethnic tolerance &amp; mutual respect should be included in performance evaluation for supervisors</td>
<td></td>
<td></td>
<td>Conduct a study of salary scales for service maintenance employees (appropriate &amp; fair?)</td>
</tr>
<tr>
<td>Exit interviews</td>
<td></td>
<td></td>
<td>Review salaries of black associate &amp; administrative staff to determine comparability with non-black staff in similar positions</td>
</tr>
<tr>
<td><strong>Recruit</strong></td>
<td><strong>Develop</strong></td>
<td><strong>Retain</strong></td>
<td><strong>Reward</strong></td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Q4</td>
<td>Supportive Chairs (consider demands on time for various activities, self-expectations, encourage and reward service of varying types)</td>
<td>Small faculty groups to discuss effective teaching methods</td>
<td>Enhance power of equity officers</td>
</tr>
<tr>
<td></td>
<td>Define position descriptions broadly</td>
<td>Articulate expectations and requirements and reward that performance</td>
<td>Review salaries of Asian American, Hispanic &amp; Native American faculty to determine if inequalities exist/rectify inequalities</td>
</tr>
<tr>
<td></td>
<td>Enhance power of equity officers</td>
<td>Develop principles of good advising and reward that activity</td>
<td>Initiate study of policies &amp; procedures on salaries, promotions, &amp; tenure in academic units to determine if they disproportionately disadvantage and/or discriminate against Asian, Hispanic &amp; Native American faculty</td>
</tr>
<tr>
<td></td>
<td>Exit interviews</td>
<td>Work to empower &amp; expedite the efforts of departments, colleges, and individual faculty who have the capacity &amp; desire to generate and utilize new sources of support</td>
<td>Create budgetary incentives that distribute revenues in ways that encourage units to be entrepreneurial, and ensure that these activities are recognized and rewarded along with high-quality research and teaching in the context of salary, promotion, and tenure decisions</td>
</tr>
<tr>
<td><strong>Recruit</strong></td>
<td><strong>Develop</strong></td>
<td><strong>Retain</strong></td>
<td><strong>Reward</strong></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Q5</td>
<td>Increase access &amp; achievement of underrepresented groups</td>
<td>Establish Nat’l Inst./Study &amp; Enhancement of Diversity</td>
<td>Keep COLA. Not merit only</td>
</tr>
<tr>
<td></td>
<td>Career development</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hispanic &amp; Native American faculty, students, and staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aggressive efforts to hire African-Americans for mainstream programs</td>
<td>Through the Office of Personnel, develop a support program designed to improve the retention and promotion of women and minorities in the Associate Staff category</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Double the # of Hispanic &amp; Native American faculty in 5 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recruit Asian American faculty into departments where they are underrepresented</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Double the # of Asian American Associate &amp; classified staff; triple the # of Hispanic &amp; Native American Associate &amp; Classified staff within 5 years (including appointments for senior &amp; supervisory positions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effective Affirmative Action Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Progress made by supervisors in creating an atmosphere of racial &amp; ethnic tolerance &amp; mutual respect should be included in performance evaluations for supervisors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ensure that explanations of procedures, options, &amp; rights be made mandatory and part of the terms of employment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Various committees for improving campus climate and promoting equity in employment and education</td>
<td></td>
</tr>
<tr>
<td>Recruit</td>
<td>Develop</td>
<td>Retain</td>
<td>Reward</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Q5 Institute programs to provide diversity programs to all supervisors that stress the value of cultural, racial, &amp; ethnic diversity</td>
<td>Through the Office of the President, undertake to ensure that classified and associate staff are represented in proportion to their numbers on committees dealing with matters affecting their interests, and that they are able to serve without hindrance on campus committees and take part in special events.</td>
<td>Conduct bi-annual survey with black faculty, staff and students to assess campus climate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enhance power of equity officers</td>
<td>Equity Council to monitor salary/equity reviews</td>
<td>Develop an active public relations program to highlight the accomplishments of Blacks.</td>
</tr>
<tr>
<td></td>
<td>Establish in each College or unit, an Ethnic Diversity/Prejudice/Reduction/Racial Sensitivity series</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish internship program for black staff employees to provide an opportunity to broaden their administrative expertise while working in another unit on campus for a semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish sabbatical leave opportunities for staff (i.e., 7 years of service = eligible to pursue education studies for one semester at full salary or 1 year at half salary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In all administrative units responsible for faculty, provide funds for attendance at national conventions (Ford Foundation, National Congress of Black Faculty) as a recruitment measure.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruit some of our own Ph.D. students of color for faculty positions at College Park, especially in disciplines where a minority faculty presence is minimal or non-existent.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit interviews: Through the Office of Academic Affairs, conduct a systemic study of women and minority faculty leaving the University (Include negative tenure or promotion decisions), in order to determine the reasons or causes for these actions or decisions, and develop recommendations consonant with the finding of the study.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recommendations listed above were obtained from the following UMCP reports:

1. Minority Achievement Plan, University of Maryland at College Park, 5/26/94.
3. Access Is Not Enough, A report to the President Concerning Opportunities for Blacks at the University of Maryland at College Park, 10/18/89.
4. Asian, Hispanic, and Native American Task Force Report, UMCP.
APPENDIX H-C

MIDDLE STATES REVIEW:

TASK FORCE ON
A VISION FOR FACULTY AND STAFF IN THE 21ST CENTURY
RESPONDING TO NEW OPPORTUNITIES AND CHALLENGES

UMCP BENEFIT COMPARISON WITH PEER AND
ASPIRATIONAL INSTITUTIONS
Executive Summary

The following charts offer a comparison of benefit programs offered by the University of Maryland College Park to programs sponsored by selected peer and aspirational institutions. In viewing this data, it was determined that the University of Maryland’s benefit program differs from the trends found at these selected institutions in three distinct areas.

First, the health insurance plan offered to University employees through the State of Maryland provided a higher rate of reimbursement for medical services rendered than was typical of other institutions. In addition, the 80 percent employer premium subsidy paid by UMCP exceeded the subsidies offered by these other universities. One other difference to note was that our plan allowed graduate and research assistants to participate in the same health insurance plan as regular employees. We are the only university in this study to make such a concession.

Secondly, the rate of contributions made by UMCP to the various State sponsored retirement programs was among the lowest found at any of the institutions in this study. Consequently, the level of salary replacement by pension income at the time of retirement will also be at the low end of this scale.

Finally, a number of our peer and aspirational institutions appear to have abandoned the method typically found in educational settings of accommodating employee illnesses through a practice of accumulated sick leave. Instead, these institutions have opted for purchasing short-term disability plans through private sector insurance companies and integrating these benefits with a fully-insured long-term disability policy. All of the institutions that have taken this approach are paying the full premium costs for their employees. Obviously, they have determined that the expense associated with this approach is more cost effective than their prior accumulated sick leave policies.
## Benefit Comparison of University of Maryland to Peer and Aspirational Institutions
Prepared May 6, 1996

<table>
<thead>
<tr>
<th>Benefit</th>
<th>UMCP</th>
<th>Texas</th>
<th>UNC</th>
<th>California</th>
<th>Arizona</th>
<th>Ohio State</th>
<th>Minnesota</th>
<th>Michigan</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life Insurance Mandatory Plans</strong></td>
<td>One Times Salary if Member of State Pension Plan. University paid</td>
<td>Max $10,000. University</td>
<td>None</td>
<td>Annual Salary to $50,000. University Paid</td>
<td>None</td>
<td>Two-and-a-half times to Maximum of $55,000. University Paid</td>
<td>Choice of Flat $20,000. Increments of $5,000 based on Salary to Max of $55,000. University paid</td>
<td>None</td>
<td>Annual Salary. University Paid</td>
</tr>
<tr>
<td><strong>Life Insurance Optional Plans</strong></td>
<td>Up to Six times Salary. Rates are Age Based. Employee paid</td>
<td>Up to Four times salary. Rates are Age Based. Employee paid</td>
<td>Decreasing Term. Rates are Age Based. Employee paid</td>
<td>Up to Four times salary. Age Based Rates. Employee paid</td>
<td>Up to Three times salary to Max of $150,000. Age Based Rates. Employee paid</td>
<td>None</td>
<td>Max $300,000. Employee paid</td>
<td>Decreasing term. Age Based Rates. Employee pays 75%</td>
<td>Up to Four times salary. Age Based Rates. Employee paid</td>
</tr>
<tr>
<td><strong>Dependent Life</strong></td>
<td>Yes. Employee pays</td>
<td>Yes. Employee pays</td>
<td>Yes. Employee pays</td>
<td>Yes. Employee pays</td>
<td>Yes. Employee pays</td>
<td>Yes. Employee pays</td>
<td>Yes. Employee pays</td>
<td>No</td>
<td>Yes. Employee pays</td>
</tr>
<tr>
<td><strong>Accidental Death</strong></td>
<td>Employee and family Max. $300,000 Employee paid</td>
<td>Employee and family Ten Times Salary Employee paid</td>
<td>Employee and family Ten times salary to Max of $500,000 Employee paid</td>
<td>Employee and family Max of $400,000 Employee paid</td>
<td>None</td>
<td>Employee only. Flat amount University paid</td>
<td>Employee only. Max of $100,000 Employee Paid</td>
<td>None</td>
<td>Employee only. Five times salary Employee paid</td>
</tr>
<tr>
<td><strong>Short-Term Disability</strong></td>
<td>None</td>
<td>None</td>
<td>Yes. One year duration. 50% of monthly salary. Max $3,000 Employee paid</td>
<td>Yes. One year duration. 70% monthly salary. Max of $5,000 Employee paid</td>
<td>Yes. Six months duration. 70% salary Employee paid</td>
<td>None</td>
<td>Yes. Six months duration. 67% monthly salary. Max of $1,500. Employee paid</td>
<td>Yes. Benefit and duration based upon length of service. University paid</td>
<td>None</td>
</tr>
<tr>
<td>Benefit</td>
<td>UMCP</td>
<td>Texas</td>
<td>UNC</td>
<td>California</td>
<td>Arizona</td>
<td>Ohio State</td>
<td>Minnesota</td>
<td>Michigan</td>
<td>Illinois</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------</td>
<td>------------------------------------</td>
<td>---------------------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------</td>
<td>----------------------------------</td>
<td>---------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Long-Term Disability</td>
<td>Yes 60% of salary monthly. Max of $8,000. Employee paid</td>
<td>Yes. 65% of monthly salary. Max of $18,500. Employee paid</td>
<td>Yes. 65% of salary monthly. Max $3,900. Premium source uncertain</td>
<td>Yes. 70% of salary monthly. Max $5,000. Employee paid</td>
<td>Yes. 65% of salary monthly. Max not stated. premium shared by employee and university</td>
<td>Yes. 50% of salary monthly. Max $4,500. University paid</td>
<td>Yes. 60% of salary monthly. Max $4,000. University paid</td>
<td>Yes. 65% of monthly salary. Max $2,300. Employee paid</td>
<td>Disability Retirement through State. University. Offers supplemental plan that pays additional 15% of salary. Employee paid</td>
</tr>
<tr>
<td>Benefit</td>
<td>UMCP</td>
<td>Texas</td>
<td>UNC</td>
<td>California</td>
<td>Arizona</td>
<td>Ohio State</td>
<td>Minnesota</td>
<td>Michigan</td>
<td>Illinois</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------</td>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tuition Remission</td>
<td>Yes. Employees eligible for graduate and undergrad courses immediately. Two courses per semester not to exceed 7 hours. Spouse/dependents eligible after employee works for 2 yrs. First degree only</td>
<td>None</td>
<td>Yes. Employees only One course per semester Excludes summer sessions</td>
<td>None</td>
<td>Yes. Employees eligible for 6 hrs. Per semester. Spouse/dependents receive reduction of 75%</td>
<td>Yes Spouse/dependents of employees with at least 3 yrs of service receive 50% reduction in undergraduate fees</td>
<td>Yes. Eligible employees may take 1 course per semester. Spouse/dependent receive waiver of non-resident tuition</td>
<td>None</td>
<td>Yes. Employees receive waiver of full tuition and fees. Dependents under age 25 receive 50% discount on first degree only</td>
</tr>
<tr>
<td>Retirement Plans</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Age 55 w/30 yrs. Age 65 w/25 yrs or any age w/30 yrs.</td>
<td>Yes. Age 65 w/5 yrs. Age 60 w/25 yrs, or any age w/30 yrs.</td>
<td>Yes. Age 50 w/5 yrs., or age 62 regardless of yrs.</td>
<td>Yes. Anytime age and service equal 80. Age 65 or age 62 w/10 yrs.</td>
<td>Yes. Any age w/30 yrs. Age 60 w/5 yrs. Or Age 65.</td>
<td>None</td>
<td>None</td>
<td>Yes. Any age w/35 yrs.</td>
</tr>
<tr>
<td>Defined Benefits</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>None</td>
<td>None</td>
<td>Yes. Any age w/35 yrs.</td>
</tr>
<tr>
<td>Normal Retirement Age</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>Yes. Sixty with 5 years, or any age w/30 years.</td>
<td>None</td>
<td>None</td>
<td>Yes. Any age w/35 yrs.</td>
</tr>
<tr>
<td>Contribution</td>
<td>Employer 54%. Employees pension and 15.09% for teacher's pension.</td>
<td>Employer 7.3% of salary.</td>
<td>Employer 10.96% of all members salaries. Employees 6% of salary.</td>
<td>Employer none. employee 2% of salary on social security wage base and 4% of compensation above wage base.</td>
<td>Employer 3.14% Employee 3.14% Employee 3.14% Employee 9.25% Employee 9.25% Employee 9.25%</td>
<td>Employer 14% Employee 3.14%</td>
<td>Employer 9.872% Employee 8%</td>
<td>Employer 9.872% Employee 8%</td>
<td>Employer 9.872% Employee 8%</td>
</tr>
<tr>
<td>Benefit</td>
<td>UMCP</td>
<td>Texas</td>
<td>UNC</td>
<td>California</td>
<td>Arizona</td>
<td>Ohio State</td>
<td>Minnesota</td>
<td>Michigan</td>
<td>Illinois</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------</td>
<td>------------------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>-----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>Define Contributions</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Eligibility</td>
<td>Faculty and Assoc. Staff</td>
<td>Faculty and Assoc. Staff</td>
<td>Faculty</td>
<td>Five yrs. or immediately if leaving employment</td>
<td>Employer 9.2% Employee 6%</td>
<td>Employer 13% of salary. Employee 2.5% of salary</td>
<td>All employees</td>
<td>Immediate</td>
<td>All employees</td>
</tr>
<tr>
<td>Vesting</td>
<td>Immediate</td>
<td>One Yr &amp; one day</td>
<td>Employer 8.5% Employee 5.65%</td>
<td>Employer 9.2% Employee 6%</td>
<td>Employer 9.2% Employee 6%</td>
<td>Employer 10% of salary. Employee 5% of salary</td>
<td>Employer 10% of salary. Employee 5% of salary</td>
<td>Immediate</td>
<td>Immediate</td>
</tr>
<tr>
<td>Contributions</td>
<td>Employer 7.25%</td>
<td>Employer 8.5% Employee 5.65%</td>
<td>Employer 9.2% Employee 6%</td>
<td>Employer 9.2% Employee 6%</td>
<td>Employer 9.2% Employee 6%</td>
<td>Employer 10% of salary. Employee 5% of salary</td>
<td>Employer 10% of salary. Employee 5% of salary</td>
<td>Immediate</td>
<td>Immediate</td>
</tr>
<tr>
<td>Supplemental Retirement Plans (403(b) plans)</td>
<td>Yes, five vendors</td>
<td>Yes, many vendors</td>
<td>Yes, 45 vendors</td>
<td>Yes, &amp; funds with 2 vendors</td>
<td>Yes, 19 vendors</td>
<td>Yes, 14 vendors</td>
<td>Yes, 5 vendors</td>
<td>Yes, 3 vendors</td>
<td>Yes, 8 vendors</td>
</tr>
</tbody>
</table>

**APPENDIX H-D**

**MIDDLE STATES REVIEW:**

**TASK FORCE ON**

**A VISION FOR FACULTY AND STAFF IN THE 21ST CENTURY**
### SUMMARY of DATA APPENDIX

#### TEN YEAR (1985-1995) WORK FORCE COMPARISON*

**TABLE 1** There has been an increase of 1938 permanent employees, a 23.3%, nearly split between full-time and part-time workers. However if the Agricultural Extension Service (353) personnel are removed from 1995 count, the number and percentage of part-timers exceeds the full time growth.

There has been a large increase in Graduate Assistants over the ten-year period: 35%.

Among the faculty, 319 more full-time faculty (subtracting out AES) and 82 part-time faculty were added.

**TABLE 2** Details of AES personnel.

**TABLE 3** Faculty salaries over the 10-year period have increased by roughly 50% (all ranks). The smallest percentage increase was found among lecturers: only 31%. Graduate Assistants’ salaries reflect a change more similar to lecturers, with an increase of 36%.

**TABLE 4** Staff salaries over an eight year period have also increased, but at more modest level than faculty (i.e., less than 20%). With the exception of skilled crafts, the University has increased in the number of women staff, especially in the Administrative and Professional categories.

**TABLE 5** Over the last five years, UMCP has increased in the number of staff and faculty who are “temporary.”

**TABLE 6** In terms of minority permanent faculty hiring, African American faculty has increased 54% or 55 individuals (including AES and the broadest definition of faculty); Asian American faculty are up by 109% (114 individuals); Hispanic faculty have increased by 20 (a 79% change) and there has been a decrease of one Native American faculty member during this part year.

**TABLE 7** In terms of staff hiring, an additional 258 African Americans have been hired (35%); 122 Asian Americans (140%); 84 Hispanic Americans (183%) and 10 more Native Americans have been added to the campus work force (250%).

*1995 figures include AES (see Table 2).
### Table 1

**Ten Year Comparison**  
**Work Force Characteristics**

<table>
<thead>
<tr>
<th></th>
<th>1995*</th>
<th></th>
<th>1985</th>
<th></th>
<th>+/- CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Total Employees</td>
<td>10,240</td>
<td>100.0%</td>
<td>8,302</td>
<td>100.0%</td>
<td>1,938</td>
</tr>
<tr>
<td>Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>6,325</td>
<td>61.8%</td>
<td>5,306</td>
<td>63.9%</td>
<td>1,020</td>
</tr>
<tr>
<td>Staff</td>
<td>3,906</td>
<td>38.1%</td>
<td>3,358</td>
<td>40.4%</td>
<td>548</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>2,420</td>
<td>23.6%</td>
<td>1,948</td>
<td>23.5%</td>
<td>472</td>
</tr>
<tr>
<td>Staff</td>
<td>3,914</td>
<td>38.2%</td>
<td>3,518</td>
<td>40.4%</td>
<td>396</td>
</tr>
<tr>
<td>Graduate Assistants</td>
<td>3,003</td>
<td>29.3%</td>
<td>2,219</td>
<td>26.7%</td>
<td>784</td>
</tr>
</tbody>
</table>

* 1995 data includes Extension Service & Contract employees
### Table 2

**1995 Agriculture Extension Service Counts**

<table>
<thead>
<tr>
<th></th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>Avg. Salary</td>
<td>#</td>
</tr>
<tr>
<td>Administrative</td>
<td>4</td>
<td>4,398</td>
<td>0</td>
</tr>
<tr>
<td>Faculty</td>
<td>147</td>
<td>45,219</td>
<td>6</td>
</tr>
<tr>
<td>Professional</td>
<td>12</td>
<td>41,715</td>
<td>2</td>
</tr>
<tr>
<td>Secretarial</td>
<td>88</td>
<td>23,134</td>
<td>15</td>
</tr>
<tr>
<td>Technical</td>
<td>30</td>
<td>23,052</td>
<td>3</td>
</tr>
<tr>
<td>Skilled</td>
<td>6</td>
<td>38,747</td>
<td>0</td>
</tr>
<tr>
<td>Service</td>
<td>32</td>
<td>18,601</td>
<td>3</td>
</tr>
<tr>
<td>Grad Asst.</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>319</td>
<td>N/A</td>
<td>34</td>
</tr>
</tbody>
</table>

Above counts & average salaries are included in all UMCP data beginning with Fall 1994 term.
Table 3

Ten-Year Comparison
Average Salaries for Full-time Instructional Faculty
(12 months salary converted to 9)

<table>
<thead>
<tr>
<th></th>
<th>1995*</th>
<th>1985</th>
<th>+/- change</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>76,605</td>
<td>48,936</td>
<td>27,669</td>
<td>56.5%</td>
</tr>
<tr>
<td>Associate Professors</td>
<td>53,078</td>
<td>35,563</td>
<td>17,515</td>
<td>49.3%</td>
</tr>
<tr>
<td>Assistant Professors</td>
<td>45,698</td>
<td>29,104</td>
<td>16,594</td>
<td>57.0%</td>
</tr>
<tr>
<td>Instructors</td>
<td>33,503</td>
<td>21,414</td>
<td>12,089</td>
<td>56.5%</td>
</tr>
<tr>
<td>Lecturers</td>
<td>33,084</td>
<td>25,243</td>
<td>7,841</td>
<td>31.1%</td>
</tr>
</tbody>
</table>

Graduate Assistant Stipends

<table>
<thead>
<tr>
<th></th>
<th>1995*</th>
<th>1985</th>
<th>+/- change</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New G.A.</td>
<td>9,990</td>
<td>7,000</td>
<td>2,900</td>
<td>41.4%</td>
</tr>
<tr>
<td>G.A. after 1 year</td>
<td>10,125</td>
<td>7,200</td>
<td>2,925</td>
<td>40.6%</td>
</tr>
<tr>
<td>G.A. on doctoral level</td>
<td>10,770</td>
<td>7,900</td>
<td>2,870</td>
<td>36.3%</td>
</tr>
<tr>
<td>Actual Salaries</td>
<td>10,341</td>
<td>7,623</td>
<td>2,718</td>
<td>35.7%</td>
</tr>
</tbody>
</table>
### Table 4

**1995 Full-Time Staff Salaries Compared to 1988**

<table>
<thead>
<tr>
<th>Category</th>
<th>1995 #</th>
<th>1995 $</th>
<th>1988 #</th>
<th>1988 $</th>
<th>Salary Change #</th>
<th>%</th>
<th>Headcount Change #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>235</td>
<td>75,633</td>
<td>268</td>
<td>65,644</td>
<td>9,989</td>
<td>15.2%</td>
<td>-33</td>
<td>-12.3%</td>
</tr>
<tr>
<td>Male</td>
<td>132</td>
<td>81,977</td>
<td>204</td>
<td>69,543</td>
<td>12,434</td>
<td>17.9%</td>
<td>-72</td>
<td>-35.3%</td>
</tr>
<tr>
<td>Female</td>
<td>103</td>
<td>67,502</td>
<td>64</td>
<td>53,213</td>
<td>14,289</td>
<td>26.9%</td>
<td>39</td>
<td>60.9%</td>
</tr>
<tr>
<td>Professional</td>
<td>1,309</td>
<td>42,582</td>
<td>924</td>
<td>34,621</td>
<td>7,961</td>
<td>23.0%</td>
<td>385</td>
<td>41.7%</td>
</tr>
<tr>
<td>Male</td>
<td>621</td>
<td>47,102</td>
<td>464</td>
<td>38,283</td>
<td>8,819</td>
<td>23.0%</td>
<td>157</td>
<td>33.8%</td>
</tr>
<tr>
<td>Female</td>
<td>688</td>
<td>38,502</td>
<td>460</td>
<td>31,614</td>
<td>6,888</td>
<td>21.8%</td>
<td>228</td>
<td>49.6%</td>
</tr>
<tr>
<td>Clerical</td>
<td>1,142</td>
<td>23,958</td>
<td>1145</td>
<td>19,203</td>
<td>4,755</td>
<td>24.8%</td>
<td>-3</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Male</td>
<td>107</td>
<td>22,036</td>
<td>104</td>
<td>18,083</td>
<td>3,953</td>
<td>21.9%</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>Female</td>
<td>1,035</td>
<td>24,157</td>
<td>1041</td>
<td>19,315</td>
<td>4,842</td>
<td>25.1%</td>
<td>-6</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Technical</td>
<td>363</td>
<td>30,722</td>
<td>368</td>
<td>26,505</td>
<td>4,217</td>
<td>15.9%</td>
<td>-5</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Male</td>
<td>271</td>
<td>31,634</td>
<td>286</td>
<td>26,942</td>
<td>4,692</td>
<td>17.4%</td>
<td>-15</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Female</td>
<td>92</td>
<td>28,035</td>
<td>82</td>
<td>24,979</td>
<td>3,056</td>
<td>12.2%</td>
<td>10</td>
<td>12.2%</td>
</tr>
<tr>
<td>Skilled</td>
<td>376</td>
<td>29,483</td>
<td>331</td>
<td>26,016</td>
<td>3,467</td>
<td>13.3%</td>
<td>45</td>
<td>13.6%</td>
</tr>
<tr>
<td>Male</td>
<td>367</td>
<td>29,486</td>
<td>326</td>
<td>26,016</td>
<td>3,470</td>
<td>13.3%</td>
<td>41</td>
<td>12.6%</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
<td>29,366</td>
<td>5</td>
<td>25,986</td>
<td>3,380</td>
<td>13.0%</td>
<td>4</td>
<td>80.0%</td>
</tr>
<tr>
<td>Service</td>
<td>482</td>
<td>18,866</td>
<td>472</td>
<td>16,504</td>
<td>2,362</td>
<td>14.3%</td>
<td>10</td>
<td>2.1%</td>
</tr>
<tr>
<td>Male</td>
<td>239</td>
<td>18,985</td>
<td>246</td>
<td>16,816</td>
<td>2,169</td>
<td>12.9%</td>
<td>-7</td>
<td>-2.8%</td>
</tr>
<tr>
<td>Female</td>
<td>243</td>
<td>18,749</td>
<td>226</td>
<td>16,165</td>
<td>2,584</td>
<td>16.0%</td>
<td>17</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

**Notes:**

1. In 1988, the Administrative category included deans and chairs which are in the faculty category in 1995.

2. Nine-month salaries have been converted to 12 month by 1.2222 factor for Administrative and Professional ranks.

3. Extension Service and contract employees were not included in 1988.
### Table 5

**Five Year Comparison**  
**Changes in Classified & Contract Staff**

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1990</th>
<th>+/- Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>#</strong></td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Total Employees</td>
<td>10,240</td>
<td>9,433</td>
<td>807</td>
</tr>
<tr>
<td>Full time</td>
<td>6,326</td>
<td>5,830</td>
<td>496</td>
</tr>
<tr>
<td>Classified</td>
<td>2,628</td>
<td>2,891</td>
<td>-263</td>
</tr>
<tr>
<td>Permanent</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Classified</td>
<td>122</td>
<td>94</td>
<td>28</td>
</tr>
<tr>
<td>Temporary</td>
<td>383</td>
<td>3,603</td>
<td>383</td>
</tr>
<tr>
<td>Contract</td>
<td>3,914</td>
<td>3,603</td>
<td>311</td>
</tr>
<tr>
<td>Part time</td>
<td>166</td>
<td>180</td>
<td>-14</td>
</tr>
<tr>
<td>Classified</td>
<td>0</td>
<td>4</td>
<td>-4</td>
</tr>
<tr>
<td>Temporary</td>
<td>8</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Faculty Term Contract</td>
<td>67</td>
<td>0</td>
<td>67</td>
</tr>
</tbody>
</table>
## Table 6
### Ten-Year Comparison
#### Total Minority & Female Faculty and Graduate Assistants

<table>
<thead>
<tr>
<th>Faculty</th>
<th>1995</th>
<th>1985</th>
<th>+/-Change 1985 to 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT</td>
<td>PT</td>
<td>Total</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,420</td>
<td>100</td>
<td>641</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td><strong>Afro-American</strong></td>
<td>125</td>
<td>5.2</td>
<td>149</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Asian American</strong></td>
<td>185</td>
<td>7.6</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td>38</td>
<td>1.6</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Native American</strong></td>
<td>4</td>
<td>0.2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All Minority</strong></td>
<td>352</td>
<td>14.5</td>
<td>416</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td><strong>Foreign</strong></td>
<td>177</td>
<td>7.3</td>
<td>229</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Female Faculty</strong></td>
<td>656</td>
<td>27.1</td>
<td>919</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td><strong>Graduate Assistants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,713</td>
<td>57</td>
<td>1,290</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching Assistants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>2,026</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Research Assistants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>977</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
1. Percents in year columns are calculated vertically as a percent of the total for each column. The percent change is the difference from 1985 to 1995.
2. Ethnicity breakdown does not include foreign.
3. 1995 counts include the Extension Services (not included in 1985). Faculty now includes 147 full-time & part-time Extension Service individuals.
### Table 7
#### TEN YEAR COMPARISONS
##### TOTAL MINORITY AND FEMALE STAFF

<table>
<thead>
<tr>
<th>Staff</th>
<th>1995</th>
<th>1985*</th>
<th>+/-Change 1985 to 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT</td>
<td>PT</td>
<td>Total</td>
</tr>
<tr>
<td>Total</td>
<td>3,906</td>
<td>100</td>
<td>270</td>
</tr>
<tr>
<td>Afri-American</td>
<td>193</td>
<td>24.9</td>
<td>30</td>
</tr>
<tr>
<td>Asian American</td>
<td>5.1</td>
<td>3.3</td>
<td>5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>127</td>
<td>3.3</td>
<td>3</td>
</tr>
<tr>
<td>Native American</td>
<td>13</td>
<td>.3</td>
<td>4</td>
</tr>
<tr>
<td>All Minority</td>
<td>1,312</td>
<td>33.6</td>
<td>43</td>
</tr>
<tr>
<td>Foreign</td>
<td>10</td>
<td>.3</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>2,169</td>
<td>55.5</td>
<td>219</td>
</tr>
</tbody>
</table>

*Note: Staff includes administrators. It should be noted that deans and chairs were in the Administrative Classification prior to 1994.*