Educating Undergraduates in a Public Honors Research University in the Twenty-First Century

Report of the Honors University Task Force

UMBC

May 31, 2000

Submitted to
Arthur T. Johnson, Provost
by
Angela Moorjani, Task Force Chair
Table of Contents

Preface
   Task Force Charge
   Acknowledgements

Task Force Membership

Executive Summary

The National Context 13
Undergraduate Education at Research Universities 15
Desirable Characteristics of UMBC Graduates 16
In Search of Best Practices 17
The Work of the Subcommittees 21
Recommendations and Discussion 21
General 21
First-year Experience 23
An Integrated Honors University Curriculum 27
Campus Response and Dialogue 35
Confronting Problems 37
Conclusion 40
References 41

Appendices
   A. UMBC Matrix
   B. Desirable Characteristics of UMBC Graduates
   C. Definitions and Criteria Developed for Duke's Curriculum 2000
   D. Proposed Requirement in Writing and Technology
   E. Model Curriculum for a Biochemistry Major
Preface

Task Force Charge

We aspire to continue our development as an honors university which seeks to combine the traditions of the liberal arts academy, the creative intensity of the research university, and the social responsibility of the public university. This vision, which informs UN-IBC’s strategic planning process, was to guide the Honors University Task Force in defining elements of an honors university experience and in recommending the means to transform the aspirations into a program of action. The topics to be explored included the opportunities and experiences that UMBC should offer each of its students, the characteristics that graduates of an honors university should have, the role of an Honors College in an honors university experience, core curriculum, civic engagement, writing and technology across the curriculum, undergraduate research, international education, mentoring, and the freshman experience. The Task Force was further invited to seek guidance from earlier campus planning initiatives and broad community input and to investigate best practices on and off campus. Succinctly put, the Task Force was charged to make recommendations on educating undergraduates in a public honors research university in the twenty-first century.

Acknowledgements

The Task Force, which worked intently throughout the 1999-2000 academic year, recognizes the thoughtful contributions of the 1996 Subcommittee on the Undergraduate Experience of the Provost’s Committee on University Priorities (PCOUP) on which it was able to build. Early in its deliberation, the present Task Force agreed to focus on two major issues: (1) the first-year experience for both freshmen and transfer students and (2) graduation requirements. Much of the Task Force’s work was accomplished by the two subcommittees charged with the exploration of these issues. The campus owes a debt of gratitude to the subcommittee members who labored long hours to weigh the pros and cons of each recommendation. None of these were come by lightly. Special thanks are due John Martello, the chair of the first-year subcommittee, SIO Petrovich, in memoriam, who chaired the subcommittee on graduation requirements until his death in February 2000, and who was intent, in his words, "on defining a campus of distinction," and Larry Lasher, who completed the task and produced a model.
subcommittee report. The members of the subcommittee on graduation requirements faced a particularly challenging task which they tackled with passionate intelligence.

The Task Force expresses its appreciation to President Freeman Hrabowski and Provost Arthur Johnson for their encouragement of the Task Force goals, their interest in progress made, and especially for sharing information and inviting consultants to campus. The Task Force is particularly grateful for the opportunity to engage in extensive and enlightening discussions with Dean Robert Thompson of Duke University. Special thanks are due Lisa Akchin, Associate Vice President for Marketing and Public Relations, for her expertise in assuring campus involvement and conducting focus groups as well as the students and alumni who responded so generously to the invitation to contribute their views. Larry Wilt, the Director of the Library, has the Task Force’s gratitude for serving as its consultant on information technology and for his guidance on this crucial topic. Finally, the Task Force was encouraged by the cordial reception that the department chairs gave its recommendations at the April chairs meeting and by their willingness to identify and grapple with the challenges that will assure IJMBC students an honors university experience.

Beth Pennington, Assistant to the Provost, and Kathy Raab, Executive Administrative Assistant in the President’s Office, greatly facilitated the work of the Task Force and of its chair by their invaluable help with gathering information, scheduling meetings and taking minutes, assembling task force documents and reports, and overall support. The Task Force would like to take this opportunity to recognize their contributions and to express its appreciation to them.
TASK FORCE ON UMBC AS AN HONORS UNIVERSITY

MEMBERSHIP

Angela Moorjani, Task Force Chair - Professor, Modern Languages and Linguistics

Earnestine Baker - Director, Meyerhoff Scholarship Program

Tom Beck - President, PASS and Chief Curator, Library

Charlie Browm - Director, Athletics

Carlo DiClemente - Chair, Psychology

Jay Freyman - Director, Honors College

Carol Hess - Chair, Dance

Ram Hosmane - Presidential Research Professor, Chemistry

Darniet Jennings - President, Graduate Student Association

Pat Joseph - Member, Board of Visitors

Joan Korenman - Director, Center for Women in Information Technology

Larry Lasher - Associate Professor, English

John Martello - Vice Provost for Community Partnerships and Executive Director, Shriver Center

Barbara Morris - President, Classified Staff Senate

Yvette Mozie-Ross - Director, Admissions/Enrollment

Slo Petrovich (until February 2000) - Director, Interdisciplinary Studies

Beth Ann Ritter - Undergraduate Student, Political Science

Tim Topoleski - Associate Professor, Mechanical Engineering

Lynn Zimmerman - Associate Professor, Biological Sciences

****

Larry Wilt, Consultant - Director, Library

Beth Pennington, Staff - Assistant to the Provost

Kathy Raab, Administrative Support - Executive Administrative Assistant, President's Office
Subcommittee on the First-year Experience

John Martello, Subcommittee Chair
Earnestine Baker
Anura Desai
Carlo DiClemente

Thomas T. Field, Director, Humanities Center
Ram Hosmane
Darniet Jennings
Pat Joseph
Barbara Morris
Yvette Mozie-Ross

Jamie Price, Director, Shriver Center

Subcommittee on Graduation Requirements

Slo Petrovich, Subcommittee Chair (Nov. 1999 - Feb. 2000)
Larry Lasher, Subcommittee Chair (Feb. - May 2000)

Tom Beck
Charlie Brown
Jay Freyman
Carol Hess
Joan Korenman
Beth Ann Ritter
Tim Topoleski
Lynn Zimmerman
Executive Summary

In the first months, the Honors University Task Force investigated best practices on and off campus, identified the desirable characteristics that graduates of a public honors research university should have, made general recommendations about components of an honors university environment, and divided into the subcommittees on the first-year experience and graduation requirements. On reaching consensus, the subcommittees presented their recommendations to the full Task Force for discussion, refinements, amendments, and adoption.

The following are the Task Force's recommendations on educating undergraduates in a public honors research university:

GENERAL RECOMMENDATIONS

1. Develop an environment of academic integrity at UMBC by establishing an honor code.

2. Support study abroad by appointing a full-time study abroad director.

3. Establish an honors environment, which in addition to the elements of an honors university experience involving the first-year experience and a distinctive honors university curriculum, includes:

   • access to quality facilities and services, especially advising
   • an institutional culture that encourages research
   • the cultivation of intellect and character
   • diversity
   • the active engagement of faculty with undergraduates through teaching, research, service, and community involvement.
RECOMMENDATIONS FOR THE FIRST YEAR EXPERIENCE AT UMBC FOR FRESHMEN AND TRANSFER STUDENTS

The funding and implementation of these proposals are recommended for summer and fall 2001 (AY 2002). In full agreement with previous and present planning initiatives and recommendations by PCOUP, the Advisement Task Force, Student Affairs, Admissions, and Academic Services, the Task Force is drawing attention to the need for an enhanced first-year program in order to assure an honors university experience for all students enrolling in UMBC.

1. **Improve orientation** and advising-mentoring for both freshmen and transfer students by
   
   a. establishing **bridge programs** for students in transition; one for freshmen and another for transfer students;
   
   b. assuring intense **advising-mentoring** for students in transition by faculty advisors and upper-level peer mentors;
   
   c. offering an elective **1-credit seminar, "Introduction to the Honors University"** (HUNI 101), graded PIT, with different sections designed for freshmen and transfer students;
   
   d. establishing **study groups**;
   
   e. encouraging tutoring and mentoring by faculty and upper-level students in departments.

2. Develop elective first-year academic seminars, with different sections designed for freshmen and transfer students.

3. Appoint a planning and development committee for the first-year experience,

4. Establish an administrative structure to focus on the enhanced first-year program and assess outcomes.
RECOMMENDATIONS FOR AN HONORS UNIVERSITY CURRICULUM

The following recommendations are proffered as starting points for intensive campus dialogue on implementing an honors university curriculum. Consultation with the departments and other campus and off-campus constituencies will begin in summer 2000 and continue through the following academic year. Submission of a final proposal to the Faculty Senate is planned for spring 2001. Another year will be devoted to organization, curricular development, and dissemination before the honors university curriculum goes into effect in fall 2002 (AY 2003).

1. Replace present General Foundation Requirement (GFR) designations by Area of Knowledge requirements as follows:

   Arts and Humanities (three courses, two of which must be in different disciplines)
   Language and Culture (current requirement)
   Social and Behavioral Sciences (three courses, two of which must be in different disciplines)
   Mathematics or Statistics (one course above the level of College Algebra)
   Biological/Physical Sciences (two courses, at least one of which must be a laboratory - course).

Note: The major departure from the present GFRs is abandoning the notion that only some courses in the Areas of Knowledge will satisfy requirements for each area.

2. Require encounters in critical and analytical thinking, core competencies, experiential learning, and focused inquiries, either as part of general education, a secondary concentration, or the major. See Appendix A for the matrix combining Areas of Knowledge with the following functional areas of learning:

   Critical and Analytical Thinking
   Quantitative, Inductive and Deductive Reasoning (two encounters)
   Interpretive and Aesthetic Analysis (two encounters)
Competencies

Writing (two encounters; a third writing encounter in the disciplines for later development)

Information Technology (ability to integrate new information technologies into education and prospective vocational activities) (one encounter)

Experiential Learning (one encounter chosen from among the following four areas)

- Research/Performance
- Internship/Cooperative Education
- Service Learning Study Abroad

Focused Inquiries

- Cross-cultural Inquiry (one encounter)
- Historical Inquiry (one encounter)
- Science, Technology and Society (one encounter)
- Ethical Inquiry (one encounter)

3. Create a secondary area of concentration requirement in all major programs to be satisfied by completion of a new or existing minor program, a new or existing certificate program, a secondary concentration approved by the major department, or a second major. The secondary concentration will consist of a minimum of 18 credits.

4. Explore the following for future expansion, development and implementation:

- Speaking and Writing in the Disciplines
- Capstone courses in the disciplines
- Technical fluency in the disciplines
- Further opportunities for undergraduate research experiences.
5. Appoint and fund a small faculty committee and a planning and development coordinator for AY 2001 and AY 2002 in order to meet with departments to refine the present proposal and facilitate the development and implementation of the new requirements.

6. Establish an Office of Vice Provost for Undergraduate Studies (in AY 2002, or latest by AY 2003) with the responsibility for leadership in implementing and monitoring the initiatives approved for educating undergraduates at a public honors research university. Learning outcomes assessment would be a function of this office.
The UMBC Honors University Task Force

on

Educating Undergraduates in a Public Honors Research University in the 21st Century

There can be no adequate technical education which is not liberal, and no liberal education which is not technical.

—Alfred North Whitehead, The Aims of Education and Other Essays
The National Context

As the Task Force grappled with its recommendations for an integrated, enriched, and rigorous program of learning for the undergraduates at a public honors research university, Whitehead’s words could have served as our guide. In the manner advocated by the late Ernest L. Boyer, we searched for ways of infusing liberal education into the curriculum, intensifying the aroma of learning acquired in general studies by deepening experiences in the majors. It was time to do so in light of the demands and opportunities facing students in the 21st century. The linkage of general education with expectations in each major is forcefully emphasized by the Association of American Colleges and Universities in its 1999 statement on liberal education along with the need to teach capacities as well as content. This is how the Association defines the contemporary goals of a liberal education: (1) fostering the core proficiencies of writing, speaking, quantitative reasoning, foreign language competence, and technological literacy, (2) redefining civic and societal knowledge by studying diverse cultures within the US and across the globe, scientific and technological revolutions, and by service learning and values exploration, (3) developing inquiry capacities in general education and the major, and (4) integrating learning from different disciplines and contexts.

From the many reports about the present wave of curricular reform, such as those by the Carnegie Foundation’s Boyer Commission, the Association of American Colleges and Universities, the Maryland Higher Education Commission, the Business-Higher Education Forum, a partnership of the American Council in Education and the National Alliance of Business, and in the evaluations of both present undergraduates and alumni of UMBC, a pattern of consensus emerges about the need to improve the preparation of students in the following areas of liberal learning:

- communication skills, especially writing and speaking (all groups agree on this and the next)
- analytical thinking
- quantitative reasoning
- ethical thinking
- fluency in information technology, including critical evaluation of its social implications
- inquiry-based learning e collaborative learning and teamwork
- experiential learning (internships, co-op, service learning, study abroad)
- integrative/interdisciplinary learning
• appreciation of the arts, humanities, sciences, and social sciences
• cross-cultural inquiry (including internationalizing the curriculum, foreign language study, and intercultural understanding within both national and international contexts (an especially strong call from the American Council on Education and the business community)
• a passion for life-long learning
Undergraduate Education at Research Universities

The expectations for research universities are even more extensive and rigorous. Many of Ernest L. Boyer's recommendations in the influential 1987 volume on the undergraduate experience were fleshed out ten years later in the "Blueprint for America's Research Universities," a report by the Carnegie Foundation's Boyer Commission. In its report, Reinventing Undergraduate Education, the Commission urged research universities to create communities of learning that are bound together, not by the transmission of information, but by shared goals of inquiry, investigation, and discovery from the freshman students to the senior research faculty. A strong introduction to the unique quality and opportunities of a research university and a strong program in general studies, the authors add, must undergird this engagement in research in order to create a community of learners. "The research university, " they write, "owes every student an integrated educational experience in which the totality is deeper and more comprehensive than can be measured by earned credits" (13).

The Boyer Commission's specific recommendations for an integrated educational experience for students at research universities include (1) an inquiry-based freshman year that bridges between high school and the research university and includes seminars that open intellectual horizons, (2) a similar bridge and seminar for transfer students, (3) undergraduate research and internship opportunities, (4) removing barriers to interdisciplinary education, (5) linking communication skills and course work ("The failure of research universities seems most serious in conferring degrees upon inarticulate students" [24].); (6) opportunities for students to learn state-of-the-art practices in information technology and to ask questions that stretch the uses of technology, (7) a capstone experience, and (8) cultivating a sense of community through rituals, such as freshman convocation, using ethnic diversity to build community values, collaborative study groups, and so forth.
Desirable Characteristics of UMBC Graduates

The members of the task force agreed that the most appropriate way to begin to identify the elements of an honors university experience is matching the characteristics that we would want graduates of an honors university to have against a set of curricular expectations that lead to the desired results. The Task Force proceeded to create its own list of desirable characteristics for the graduates of a public honors research university, based on a number of previous committee reports, input provided by participants at the August 1999 Presidential Retreat, I-WBC planning documents, and task force discussions. Foremost among the reports was the list of "Attributes of the Ideal UMBC Undergraduate" generated by the PCOUP Undergraduate Experience Subcommittee in December 1996. The Task Force was intent on recognizing and building on the work of this subcommittee and to thereby assure continuity of effort and thought. Such continuity was further enhanced by the six members of the Task Force who were members of the earlier subcommittee. Not surprisingly, the Task Force list overlaps not only with the earlier PCOUP list but also with those of the Boyer Commission and other associations, although there are also ways in which the Task Force list goes beyond the usual, in advocating the understanding of the basic concepts of healthy living; historical perspective and the ability to view the long-term effects and implications of individual and social actions on the economy, society, and environment; the emphasis on community service and civic engagement; aesthetic response; and understanding the difference between ends and means, rights and privileges and responsibilities. (See Appendix B.)
In Search of Best Practices

In looking at best practices, the Task Force found that many of the first-year experiences and opportunities for undergraduate research and collaborative and experiential learning advocated by the Boyer Commission and others were already honorably represented at UNIBC in programs such as those for the Meyerhoff Scholars, other scholar’s programs such as the Humanities Scholars, Artist Scholars, Public Affairs Scholars, the Honors College, and the Shriver Center. The question became how to extend these opportunities to more students at UNIBC. Earnestine Baker, John Martello, Jay Freyman, and Thomas Field, all members of the Task Force or of one of its subcommittees, reported on the exemplary practices in their programs which already provide select UNIBC students with an honors experience.

The Meyerhoff Program

Earnestine Baker provided background on the Meyerhoff program, initially founded in 1989 for high achieving African American males committed to careers in science, mathematics, and engineering. The program has, through the years, become increasingly inclusive (admitting women in 1990) and now aspires to recruit candidates for MD[PhD or PhD programs in fields wherein various minorities are underrepresented.

Of the many components comprising the first-year experience for Meyerhoff students, the six-week summer bridge program is particularly noteworthy. An intense curriculum (pre-calculus or calculus, physics or chemistry, algebra for engineering students and analytical study and problem solving in the humanities), seminars (time management, study skills, stress management), field trips to many area science labs, professional development workshops (dressing for success, public speaking, multicultural programs) and a variety of social experiences to encourage bonding constitute a rigorous foundation for commitment and success.

Among other essential facets of the Meyerhoff program are study groups, mentoring by Meyerhoff staff, involvement of the parents, one-on-one tutoring, involvement in departmental tutorials, and interaction with faculty. The strengths of the program were summarized as emphasis on advising, support, and holding students accountable.
**The Shriver Center**

John Martello described the need of students to connect what they learn with what they do. The Shriver Center’s programs, linking the university with hundreds of businesses and organizations through internships and co-ops and connecting students with a wide range of social service projects, now extends to 13 offices throughout Maryland and 6 nationwide. For undergraduate students, the three facets of experiential learning are: internships (connecting theory to practice), co-ops (study in the world of work), and community service (involvement in social problems, ethics, civic responsibility). Ideally students should experience two of the three facets. Typically, the internship and co-ops are limited to students beyond their freshman year with at least a 2.5 GPA. The freshmen can perform service, for which there is an enormous demand in the community.

There is a strong infrastructure for the programs, including a group introductory program. Recruitment is through direct mail, class presentations, and self-selection among students. All host organizations are given student resumes from which to choose. Since 1979, the collaborations with host organizations have been curricular, including learning objectives, assessments, and written agreements to assure that the host is committing to learning, not merely inexpensive labor.

Students’ interests in the environment, criminal justice, and other areas are matched with appropriate programs. Students placed in internships, co-ops, or community service enroll in a zero-credit course, which is noted on their transcripts, and receive a PIF assessment.

The practices of the Shriver Center have been imitated nationally. With approximately 1,000 students placed per year, there are at present more opportunities than there are students. Members of the Shriver Center are interested in helping faculty integrate components of experiential learning into their courses/curricula.

**The Honors College**

Jay Freyman explained four principles of the Honors College: (1) Like (and inspired by) the Meyerhoff program, there has been an effort to build community; (2) the Honors College has worked to establish distinctiveness among its approximately 500 students; (3) there has been a concerted effort to establish personal contact, engaging three faculty members to work with 25 about how to assess talent. The Honors College recognizes that SAT scores and GPAs don’t necessarily indicate such important factors as curiosity,
talent, drive, and will. Therefore, a separate application process has been developed that includes essay compositions.

A special orientation includes a common reading experience for incoming students, with discussion groups of 15-20 students per two faculty members. If students are entering the program with fewer than 60 credits, they take a 1-credit, PIF Honors Forum (HONR 100). This course examines life in the academy and includes discussion of what it means to be an honors student and stresses that education is more than pre-professional, pre-vocational study.

In general, advisement sessions are very important for the Honors College experience. Honors College students, who are held to an honor code, take an average of one honors course per semester. Honors classes are small (below 25 students), thus permitting collaborative learning and ample dialogue and writing. The Honors College encourages study abroad and maintains its own program of foreign study during summer and winter sessions. Students also have the opportunity of participating in seminars with Honors College Visiting Scholars and to join the Honors Student Association which sponsors a wide array of cultural activities.

Freshmen students receive congratulatory letters upon meeting requirements of the program. A certificate of general honors is awarded on the completion of six honors courses with a grade of "B" or higher in each course and an overall GPA of 3.25. Students may then pursue departmental honors in their major programs.

It was noted that the existence and success of the Honors College were instrumental to UMBC's success in obtaining a charter of Phi Beta Kappa.

**The Humanities Scholars Program**

Tom Field explained that the Humanities Scholars participate in the Honors College. In addition to the program of enrichment provided by participation in the Honors College, the program seeks to establish a distinctive community of scholars in the first year. A two-semester freshman seminar links groups of 14-15 students with faculty from two different disciplines. Building of the cohort group is very important in the program, and the bond initially established is maintained.
Field trips (to museums, for instance), non-western studies, exploration of current research topics, and participation in the Humanities Forum lectures and events contribute to the program. It is hoped that, with additional funds, a Senior seminar will be added.

**Other Institutions**

In looking at best practices at other institutions--a large file was gathered and made available to Task Force members--the Task Force was particularly impressed with the matrix developed at Duke University. Lauded in an article in The Chronicle of Higher Education, Duke's Curriculum 2000 exemplifies the contemporary goals of interconnecting liberal education with the special qualities of a research university. In particular, Curriculum 2000 manages to link foundational requirements in the areas of knowledge with core proficiencies and focused inquiries and to interconnect liberal education with undergraduate research and major study. It is this interconnectedness of knowledge and functional learning that particularly appealed to the Task Force as it developed its own draft matrix incorporating UMBCs present General Foundation Requirements with the capacities, focused inquiries, and research and experiential learning that the Task Force had identified in its list of desirable characteristics for UMBC graduates. The UN'TBC matrix, although modeled on Duke's grid format, departs from it in major ways owing in part to Maryland Higher Education Commission (NIHEC) directives on general education, but even more significantly, owing to the addition of experiential learning and competency in information technology to the matrix and maintaining UMBC's carefully crafted language-culture component. (A major expense for Duke was the development of a language requirement ex nihilo for Curriculum 2000.). The one-day visit to campus of Dean Robert Thompson, who was instrumental in the development and implementation of Duke's Curriculum 2000, provided the Task Force with additional insights into the development of the integrated curriculum and the need for careful planning and discussion, especially in relation to transfer students.

On the first-year experience, the Task Force found the FOCUS program at Duke University, and the first-year seminars at Stanford University and at Trinity College (Connecticut) of special interest. For the one-credit orientation seminars, the program at Florida State University served as a model. Also considered by the Task Force were curricula and programs from dozens of other institutions, including peer institutions such as the University of Delaware.
The Work of the Subcommittees

Having agreed on what graduates of a Public Honors Research University should be able to do and having explored best practices on and off campus, the Task Force members focused on two major plans of action: the first-year transition for freshmen and transfer students and an integrated curriculum. Two subcommittees were formed on (1) the first-year experience, and (2) graduation requirements. (Please see the preface and list of members at the beginning of this report for details.)

In addition to the goals identified for the graduates of a Public Honors Research University and the best practices both on and beyond the campus, the subcommittees took into account a number of issues of practical import:

- resource limitations;
- NIHEC and Board of Regents mandates, such as the parameters set for general education requirements, articulation and transfer policies, and the recent BOR policy on technological fluency;
- the nature of our student body, including the large transfer population;
- major requirements in different disciplines;
- faculty workload, and
- the need for faculty development opportunities.

Task Force Recommendations and Discussion

This part of the report expands on the Task Force's major recommendations (listed in the executive summary) and provides pertinent rationales, cost estimates, and a timetable for future action. Many of the best practices investigated on and off campus have been integrated into our proposal to establish a culture of academic integrity, an honors environment, and a first-year experience and integrated curriculum worthy of a public honors research university in the twenty-first century.

General Recommendations

Several recommendations made by the Task Force overlap with ongoing campus initiatives and serve to give them priority. These are:
RECOMMENDATION 1, General Recommendations: Develop an environment of academic integrity at UMBC involving administrators, faculty, and Students. The task force recommends establishing an honor code but, is aware that the scope and implementation of such a code require careful consideration.

RECOMMENDATION 2, General Recommendations: Appoint a full-time study abroad director. This recommendation supports study abroad in the honors and fellows program on campus, the cross-cultural and study abroad areas of the proposed integrated curriculum for a public honors research university, as well as the recommendations of the UMBC committee for International Education of January 6, 2000.

RECOMMENDATION 3, General Recommendations: Establish an honors environment. Most of the characteristics of such an environment are incorporated into the subcommittee recommendations.

Those that are not fully captured there, but on which the Task Force reached consensus, include:

- access to quality facilities and services, especially advising
- an institutional culture that encourages research
- the cultivation of intellect and character
- diversity
- the active engagement of faculty with undergraduates through teaching, research, service, and community involvement

Specific aspects of an honors environment that members of the UMBC community privileged in their input to the Task Force include:

Facilities and Services:

- longer library hours, especially on Friday evenings
- classrooms that are configured to foster learning by providing adequate space, quality furnishings and instructional technology, and a noise-free environment
- quality food services
Diversity:

- increasing and maintaining Latino enrollment at UMBC in proportion to the increase in the Latino population in the surrounding communities

Academic Climate:

- creating more synergies between general education courses and the distinguished outside speaker’s series of the Humanities Forum and the Social Sciences Forum
- enriching the undergraduate experience by fostering and expanding the opportunities for strong MindSports, such as the chess and debating teams and the Model United Nations club.

Note: A number of initiatives and reports that were within the purview of the Task Force's charge reached it too late in the academic year for full discussion. The Task Force acknowledges the serious issues and solutions identified in the draft, "Strategic Plan for Information Technology," in the report addressed to it on increasing Latino enrollment at IJNIBC, and in the Honors College's "Plane Tree Program for Provost's Scholars. It advocates full campus dialogue on the reports and consideration of their recommendations in the planning and budget process.

Recommendations on the First-year Experience

RECOMMENDATION 1, First-year Experience;

IMPROVE ORIENTATION AND ADVISING/MENTORING FOR FRESHMEN AND TRANSFER STUDENTS

BY

a. establishing bridge programs for students in transition; one for freshmen and another for transfer students;
b. extending the bridge program by an elective 1-credit Seminar, "Introduction to the Honors University" (HUNI 101), graded P/F, with different sections designed for freshmen and transfer students;
c. assuring intense advising-mentoring for students in transition by faculty advisors and upper-level peer mentors during the summer and throughout the orientation period, establishing study groups,
d. encouraging tutoring and mentoring by faculty and upper-level students in departments.

Rationale:

1. Among the best practices consistently emphasized by the Honors College and the Meyerhoff and Humanities Scholars programs at UMBC and recommended by the Boyer Commission, a bridge introducing students in transition to the demands and opportunities of an honors education at a research university stands out, along with the helpfulness of study groups and tutoring and mentoring.

2. A 1-credit orientation seminar is already required by the Honor’s College and the Meyerhoff program and offered by 72% of accredited colleges and universities, including selective research institutions. Research has shown that the seminar increases retention and graduation rates.


RECOMMENDATION 2, First-year Experience

DEVELOP ELECTIVE ACADEMIC FIRST-YEAR SEMINARS FOR FRESHMEN AND TRANSFER STUDENTS

The task force recommends the development of elective first-year academic seminars of the type required of the Humanities scholars. These students take a two-semester interdisciplinary seminar in their first year, which is team-taught by full-time professors. Limited to 14-15 students, such seminars serve to establish distinctive communities of scholars and to challenge students to hone their critical and interpretive skills by exploring themes spanning several disciplines, East and West, present and past. The analytical and communication skills, interdisciplinary focus, in-depth understanding of a major theme, and the advantages of shared learning that they will experience in the first-year seminar set them on the way to becoming the graduates that we envisage for an Honors University.
Rationale:

1. As an Honors University, UMBC lags behind the many institutions providing their new students with the possibility of participating in the intellectual excitement, personal growth, and collaborative learning fostered by first-year seminars. At Duke University, the first-year FOCUS program involves 30 participants in each of 13 thematic programs. The students must apply and are selected by the directors of the programs. Students accepted into a program, take two FOCUS seminars (limited to 15 students and taught by distinguished professors), a writing course connected to the seminars, and participate in conversations over dinner. They also live together in campus housing. At Stanford, 244 freshmen and sophomore small-group seminars taught by senior faculty are being offered in AY 2000. At Trinity College (Connecticut), which offers a particularly impressive program of first-year seminars, the seminar instructors also serve as the students' advisors-mentors during the first semester.

2. Like the bridge program, first-year seminars taught by senior faculty are already part of the best practices of the Honors College and the Humanities Scholars program at UMBC and are recommended by the Boyer Commission for research universities.

RECOMMENDATION 3, First-year Experience;

APPOINT A PLANNING AND DEVELOPMENT COMMITTEE FOR THE FIRST-YEAR EXPERIENCE

Rationale:
As soon as funding is assured for the first year-initiatives, a first-year committee would need to flesh out the proposals in consultation with UMBC departments, Student Affairs, Admissions, Academic Services, the Shriver Center, and the surrounding high schools and community colleges.

RECOMMENDATION 4, First-year Experience;

ESTABLISH AN ADMINISTRATIVE STRUCTURE TO FOCUS ON THE ENHANCED FIRST-YEAR PROGRAM

Rationale:
An administrative structure to oversee the newly enhanced first-year program is a necessity to assure its development, implementation, and smooth functioning. Additionally, such an administrative entity will be charged with outcomes assessment of the program.
WHAT WILL THE PROPOSED FIRST-YEAR PROGRAM COST?

The **bridge program and enhanced summer advisement** by faculty and peer mentors will entail the payment of more reasonable summer salaries to participating faculty and students.

The probable cost of the **1-credit orientation seminar**, which could be team-taught by faculty, staff from Student Affairs, the Shriver Center, Academic Services, and trained peer leaders, may be gleaned from the cost of a similar seminar at Florida State University (FSU). This Research I campus started the orientation seminar program in 1997 by running 13 sections capped at 22 students per section. They have doubled the number of sections in each subsequent year. Ten sections will be offered in summer 2000 and 40 in the fall. The program is funded by the Provost's office and some state appropriations and involves the following expenses per section:

$1000  
 stipend to participating faculty (for use for professional development—conferences, journals, association memberships)

$200  
 stipend to undergraduate peer leaders

$370  
 programming funds for cultural events, field trips, and instructional materials

$1,570  
 per section

Other expenses of the orientation seminar program at Florida State University include:

$4100  
 instructor and student recruitment and training

$5000  
 stipends to graduate assistants interested in teaching and internship credit

$38,500  
 office support, including the coordinator's salary ($29,000), a stipend for a graduate assistant ($6,000), professional development ($23 50), and office supplies ($1000).

The total funding for the program and office at Florida State University for 50 sections is $126,100. As at Florida State University, we could start with a small number of sections as a pilot and increase funding yearly. As a pilot, the program of one-semester first-year seminars could be limited to let's say 90 students, i.e., 6 seminars, some designed for freshmen, others for transfer students. If modeled on the Humanities Scholars program, the expenses would involve a $2000 summer stipend for seminar preparation and a one-course part-time replacement for the full-time faculty member. For 6 seminars, the cost would be approximately $30,000 (at $3,000 per part-time replacement). Another possibility is to ask each department to offer one first-year seminar every year or every other year and to link this initiative to faculty development. That is,
the professors could meet as a group to design student-centered methods of teaching the seminars under the guidance of either the Presidential Teaching Professors or the faculty members that have taught the freshmen seminars for the Humanities scholars, or a mixture of these. In this model, no replacement would be paid, but some compensation would be required for the faculty development initiative, perhaps summer funding of $2000 for the participants and model teachers. If we begin with 15 first-year seminars, the budget required would be about $34,000.

The cost of an administrative structure to coordinate the first-year experience depends on the form it takes. It is estimated that at a minimum it will involve hiring a director of the First-year Experience and office supplies.

IMPLEMENTATION TIMETABLE FOR THE PROPOSED FIRST-YEAR PROGRAM:

Summer 2000 and Academic Year 2001
The First-year planning committee refines the Task Force's proposals in consultation with constituencies on and off campus.

Summer 2001 - and Academic Year 2002
Piloting of proposals for the First-year Experience.

Recommendations for an Integrated Honors University Curriculum

The Task Force presents the following proposals worked out by the Subcommittee on Graduation Requirements as starting points for extensive campus discussion. The Task force amended and approved the Subcommittee's report at its 18 April 2000 meeting. A slightly edited and augmented version of the report follows.

RECOMMENDATION 1, Honors University Curriculum:

REPLACE PRESENT GENERAL FOUNDATION REQUIREMENT (GFR) DESIGNATIONS BY AREA OF KNOWLEDGE REQUIREMENTS AS FOLLOWS

Three courses in Arts and Humanities (must include courses from two disciplines) *
Current Language Culture Requirement
Three courses in the Social and Behavioral Sciences (must include courses from two disciplines) *
One course in Mathematics or Statistics above the level of College Algebra
Two courses in the Biological/Physical Sciences (at least one of which must be a laboratory course) *

*The requirements in parentheses are mandated by MHEC.

All courses in the relevant disciplines will counts Area of Knowledge courses except those designated by the faculty of the relevant discipline as not meeting an Area requirement. Courses in applied areas, and other courses falling outside the defined areas of knowledge will not count toward general education credit. Cross-listed courses will carry all appropriate area designations. No course may count toward more than one Area designation in any individual student program. While Advanced Placement credits will count toward the degree, no AP high school course may satisfy an Area of Knowledge requirement. No course in which less than a grade of C is earned may meet an Area of Knowledge requirement.

Rationale:

1. The now decades-old distinctions between area of knowledge courses which meet general education criteria and those that do not have lost any clear rationale.
2. While the general organizing principle for distribution requirements remains sound, the demands of the rapidly changing social, political, economic and vocational world demand more carefully designed and pointed educational experiences.
3. The Task Force therefore recommends that this structure be retained but that no qualifying distinctions be made among the courses in any area of knowledge, and that the mechanism for defining the contribution of a given course to general education should arise out of new functional learning categories—as listed below in Recommendation 2.

**RECOMMENDATION 2, Honors University Curriculum:**

REQUIRE A NUMBER OF ENCOUNTERS IN CRITICAL AND ANALYTICAL THINKING, CORE COMPETENCIES, FOCUSED INQUIRIES, AND EXPERIENTIAL LEARNING

The Task Force recommends, that in addition to the Areas of Knowledge requirements, students complete a number of encounters in functional areas of learning as part of general studies, a secondary concentration or minor, and the major. Toward this end UMBC departments need to examine existing courses (and where appropriate modify existing courses or create new ones) in terms of specified criteria for encounters in functional modes of learning. See Appendix A for the matrix combining Areas of Knowledge with the following functional areas:
Critical Analytical Thinking

Quantitative, Inductive and Deductive Reasoning (two encounters)
Interpretive and Aesthetic Analysis (two encounters)

Competencies

Writing (two encounters, a third writing encounter in the disciplines for later development)
Information Technology (ability to integrate new-information technologies into education and prospective vocational activities) (one encounter)

Experiential Learning (one-encounter Chosen from among the following four areas)

Research/Performance
Internship/Cooperative Education
Service Learning
Study Abroad

Focused Inquiries

Cross-cultural Inquiry (one encounter)
Historical Inquiry (one encounter)
Science, Technology and Society (one encounter)
Ethical Inquiry (one encounter)

Rationale:
These functional learning areas, in which students will be required to complete one course or more (an "encounter" is the completion of a course with the appropriate designation with a C or better) will sharpen the general education requirements into four functional areas. All UMBC graduates will be required to experience -each of the functional areas as they are-defined in the final proposal. The currently-proposed matrix of areas of knowledge and functional categories and subcategories of courses attempt to be responsive to the earlier committees' and the Task Force's deliberations that asked and answered questions about the nature of the academic experiences a graduate of an honors university should encounter. The development of definitions and criteria for each of these functional areas will be the occasion for faculty to reappraise course syllabi and methods and to reconsider course content in light of general education goals.

In addition to satisfying the Areas of Knowledge requirement, students Will be required to complete twelve encounters with the cross-cutting functional modes of learning as indicated above. A course may count for
one Area of Knowledge requirement and up to two encounters. A course may carry up to three encounter
designations. No course in which a grade of less than a C is earned may count as a completed encounter.

Current State of the Functional Learning Proposal and Potential Future Developments

1. Additional functional areas for additional exposures are not precluded.

2. Draft definitions of encounter categories will be the subject of discussion with appropriate
departments and other interested faculty. These definitions will include criteria to be met in order
for a course to acquire the stipulated designation. Initial definitions and criteria will be made
available as the basis for these discussions. See Appendix C for a sample of the definitions and

3. Initially, the "Writing" encounter will be met through a newly expanded, two-semester writing
requirement that will teach writing in the context of computer technology. This sequence will also
meet the initial exposure requirement in "Information Technology." See Appendix D for a
description of the proposed university requirement in writing and technology provided by the
English Department. The Task Force also recommends the appointment of a faculty group to explore
the feasibility of developing a "Speaking and Writing in the Disciplines" requirement. If
implemented, this requirement would increase the requisite "Writing" encounters to three and add
one or more encounters in "Speaking." The third experience in "Writing" and potential encounters
in "Speaking" will be in discipline-based courses.

4. Initially, the encounter with "Information Technology" will be met by the new writing sequence
being developed in the English Department. The Task Force also recommends that the departments
be asked to evaluate the extent to which majors are provided with the necessary technical fluency
required in the world of work related to the discipline. An appropriate committee will consider these
evaluations and make recommendations to the Faculty Senate and the Provost for additional
requirements, courses, and related resources. Requirements beyond this initial encounter will be
imposed in the departmental programs as an outcome of this internal evaluation and proposal
process.
5. Present thinking is that students will be asked to complete one encounter in "Experiential Learning," although the desideratum is that every student be involved in a "Research/Performance" experience as well as some sort of real-world learning experience. The present proposal recognizes both the limitations on resources and the time needed to develop a number of courses to satisfy such requirements. The Task Force recommends the formation of an appropriate group of faculties to consider this question further, and to explore the possibility of expanding this requirement. The Task Force also wishes to emphasize that encounters in these areas must take place in an appropriate, credit-bearing academic context, with direction and evaluation provided by faculty, and with appropriate requirements and evaluative processes in place.

6. The 12 encounters are intended to intersect with both the Areas of Knowledge and majors, minors, and the secondary areas of concentration proposed in Recommendation 3.

RECOMMENDATION 3, Honors University Curriculum:

REQUIRE THE COMPLETION OF A "SECONDARY AREA OF CONCENTRATION" AS A CONDITION OF MEETING MAJOR REQUIREMENTS

This concentration will consist of a minimum of 18 credits in one of these categories:

A new or existing minor program
A new or existing certificate program
A secondary concentration of courses approved by the major department
A second major

Rationale:
To provide I-TNIBC students with a second in-depth exposure to a discipline, an aspect of a discipline, or an applied area of study, as a further liberalizing element in the individual student's program, and/or as a secondary vocational credential in the world of work.

1. To make better and more economical use of an important asset--the thirty-some minors and certificate programs in our current catalogue.
2. To make more strenuous demands on UMBC students than is currently our practice.
3. To help students to make better, more coherent use of elective courses.
4. To encourage the development of additional interdisciplinary minors and certificate programs.
5. To differentiate the UMBC undergraduate program from others in the state and nation.

6. The choice of secondary concentrations will rest with the student in consultation with an academic advisor.

RECOMMENDATION 4, Honors University Curriculum:

DEVELOP CAPSTONE EXPERIENCE IN ALL DEPARTMENTS

The Task Force recommends that all departments be urged to develop courses that will qualify as "capstone experiences" according to criteria for such experience to be worked out during the developmental process of the next year. Possibilities are a senior seminar that requires a major project, an undergraduate thesis, a semester long experiment that cultivate in a paper, a presentation or other end-product, an internship that results in an extensive report, a performance, exhibition or recital.

The Task Force recognizes that such a requirement may raise serious resource questions in heavily enrolled majors. Departments should identify courses/experiences where they already exist, develop them where they do not and where resources are more or less available, and develop estimates of cost in those departments where they do not exist and where they are precluded by current budgetary considerations. The intention is that over time, all programs will offer one or more capstone experience.

Rationale:
The Task Force feels strongly that wherever possible, students be exposed to a synthesizing, capstone experience in or outside the major program. Part of the developmental work this coming year will include a careful definition of such experiences. The hallmark of this experience will be a close interaction between the student and core faculty. Classes out of which such experiences will arise will typically be small.

RECOMMENDATION 5, Honors University Curriculum:

APPOINT AND FUND A SMALL HONORS UNIVERSITY CURRICULUM COMMITTEE AND PLANNING DEVELOPMENT COORDINATOR

The Task Force recommends the appointment and funding of a small faculty committee and a planning and development coordinator for AY 2001 and AY 2002 in order to meet with the departments to refine the
present proposal for an honors university curriculum and to facilitate the development and implementation of the new requirements.

**Rationale:**

As in the case of the Task Force's recommendations for the first-year experience, the campus dialogue on an Honors University curriculum at UMBC that is being initiated by the above proposals requires constant attention and direction in the upcoming academic year. As the discussions with departments progress, the proposals will need to be refined and amended and prepared for presentation to the Faculty Senate for final approval. After Senate approval of an Honors University curriculum, the planning committee will need to set in place an approval process for matching functional area designations with courses and devote time and thought to generating catalog descriptions and educating the campus about the integrated Honors University curriculum. An electronic student monitoring system will need to be designed to facilitate keeping track of the accumulation of requirements toward graduation. Articulation agreements will need to be crafted for transfer students.

Additionally, as made clear by a number of recommendations, especially 2 and 4, the Task Force envisages several planning functions for the proposed committee in order to bring the work begun by the Task Force to fruition. Among these are drafting definitions of encounter categories and capstone experiences and further strengthening the requirements in core capacities and research by exploring writing, speaking, and technological fluency in the disciplines (perhaps by means of subcommittees) and the possible expansion of undergraduate research. Finally, the planning committee will need to investigate the scheduling implications of the Task Force proposal to require secondary concentrations for graduation.

**RECOMMENDATION 6, Honors University Curriculum:**

**ESTABLISH AN OFFICE OF VICE PROVOST FOR UNDERGRADUATE EDUCATION**

The Task Force strongly recommends the establishment of an office of Vice Provost for Undergraduate Education with the responsibility for leadership in implementing and monitoring the initiatives approved for educating undergraduates in a public honors research university. Such an office should be active by AY 2003 when the Honors University curriculum is to be implemented. Learning outcomes assessment would be a function of this office.
Rationale:
Once the Task Force's and planning committees' work is completed, a structure is needed to assure the effective implementation of the designed programs and to continue to foster the quality, coherence, and funding of the undergraduate curriculum and experience. Without such a structure, Carol Schneider, President of the Association of American Colleges and Universities, cautioned during a recent visit to UMBC, curricular innovations are put in jeopardy.

WHAT WILL THE PROPOSED HONORS UNIVERSITY CURRICULUM COST?

The initial stages of implementation of this set of recommendations will involve a major expenditure for additional full-time faculty in the English Department to develop and staff the new six-credit composition and technology sequence. An estimated $500,000 to $700,000 will be needed for this project. Other costs will be associated with faculty development, release time and summer stipends for course development, and faculty compensation for the direction of experiential learning projects. The envisioned later developments—additional program-based work in technological fluency, writing and speaking in the disciplines, expansion of undergraduate research opportunities and the development of capstone experiences where they don't exist have obvious cost implications that will have to be taken up later. Additional costs will be engendered by training and augmenting staff where necessary. Finally, the cost of establishing an office of Vice Provost for Undergraduate Studies is estimated to be from $125,000 to $175,000.

IMPLEMENTATION TIMETABLE FOR THE HONORS UNIVERSITY CURRICULUM:

Summer 2000 and Academic Year 2001
The small faculty planning committee and the planning and development coordinator begin meeting with departments and other affected offices in order to refine the proposal and facilitate the development and implementation of the new requirements. The committee will assure on-going discussion of Writing and Speaking in the Disciplines, technological fluency, research opportunities, capstone courses, and other matters for further development, as identified under recommendation 5. The final proposal is approved by the Faculty Senate.

Summer 2001 and Academic Year 2002
An approval process for the functional area designations will need to be put in place. Preparations for implementation (see details under recommendation 5) will proceed along with continued discussion of
strengthening the requirements in the core proficiencies of writing, speaking, and technological fluency along with enhancing research and capstone opportunities.

Fall 2002 (AY 2003)
New requirements in effect.

**Campus Response and Dialogue**

**Campus and Alumni Response**
Charged with obtaining input from campus governance groups, faculty, staff, students, alumni, and other external constituents, the Task Force solicited contributions in the fall through articles in Insights and The Retriever and presentations to the Faculty Senate, the Directors' meeting, the executive board of the Student Government Association, the Provost's and President's student advisory councils, and the Modern Languages and Linguistics articulation panel with high school and community college teachers. Offers of similar visits were made to the staff senates. The results of the 1997 and 1998 student exit survey results provided by the Office of Institutional Advancement were closely studied. In addition the Task Force invited answers to general questions posted on an electronic "Strategic Planning Process Guestbook" accessible through myUMBC. Questions tied closely to the preliminary recommendations generated by the subcommittees were the basis of a number of focus groups of students and alumni in the spring. Finally, the Task Force and subcommittee chairs submitted a report to the department chairs at the April chairs meeting.

The response received by the Task Force from student groups is exemplified by the focus group results. The Task Force charge was presented to the focus groups as follows:

> UMBC is achieving distinction as a selective public research university offering a rich undergraduate experience. Many students already take advantage of special scholarship programs, double majors or minors, service learning opportunities and research opportunities to challenge themselves and enrich their undergraduate education. For this reason, we speak of UNIBC as "an honors university," and the task force is discussing ways to extend this honors university experience to even more students.
The key points that emerged from the discussions were documented by Lisa Akchin who conducted the three focus groups (two for present students, one for alumni):

The students and alumni seem ready and eager to rise to the more challenging requirements that the Honors University Task Force is considering.

Many students said advising would be crucial if these changes are implemented.

There was a lot of support for additional first-year programs, especially summer bridge, the one-credit Introduction to an Honors University, and group study.

There was support for additional writing requirements, but division as to whether this should be in the freshman English arena or incorporated through writing in the major.

The speaking skills requirement [which was part of the original UN-IBC matrix] met with great support, with some suggesting this could be offered in the major rather than as an additional, new course.

There was widespread acceptance and appreciation of the proposed graduation requirements [the integrated curriculum] and secondary concentration requirement.

To these could be added the advantages students pointed out for the experiential learning requirement, the cross-cultural requirement, and stronger emphasis on the arts.

Members of the Alumni Focus Group provided a number of especially cogent reasons for their support of particular Task Force proposals:

On a second course in writing and technology:

- As a manager, I would encourage UMBC to focus on content in writing. [. . . ] When I entered the business world as a new graduate, I felt below average. I don't remember learning how to communicate with different audiences. [. . . ] Producing graduates with good writing skills is a good opportunity for UNIBC to touch business and technology. (Information Systems '93)
On the secondary concentration:

Having more structure than just taking electives to get enough credits to graduate opens up more opportunities for careers or graduate study. (Economics '97)

On the integrated honors university curriculum:

This makes for more well-rounded students. If you've got a challenging curriculum, you'll attract higher quality students. It's a good idea to challenge students to learn beyond the basics. Don't be afraid to raise standards. (Social Work '95)

This curriculum would have challenged me, made me work harder. I wouldn't have been able to slack off, and I would be better off today. I went to I-nv1BC for IFSM, not the experience, but I would be a better person today if I had it. (Information Systems '93)

Future Dialogue
The Task Force considers its recommendations starting points for plans of action to be implemented after intensive campus dialogue. A series of consultations with departments and other campus and off-campus constituencies is to take place over the summer and the next academic year.

Confronting Problems
Either anticipating questions likely to be raised by the campus community about the recommendations for an integrated honors university curriculum or responding to concerns expressed by department chairs and colleagues, the members of the Task Force and particularly of the Subcommittee on Graduation Requirements began to think through a number of possible problems.

Credit Hour Burden on Students
Aside from the additional three-hour requirement in writing and technology, it is not anticipated that the proposed honors university curriculum will result in a heavy additional burden for students. Because of the multiple designations of many courses, most students will be able to complete the required encounters within
- or almost within - the context of the present credit hour requirement in the GFRs, i.e., circa 36-40 hours, and in the major.

**The Secondary Concentration**

This requirement will not increase the credit hour requirement for the degree, but will impose some significant restrictions on student choice within the elective area. The intention is to impose some coherence on the elective choices and, at the same time, to provide students with a significant, guided experience where now there is often incoherence in an arbitrary collection of courses. It will also provide students with an additional credential useful in the job market. In majors with heavy credit hour counts, it is expected that double counting—e.g., chemistry courses may count as both part of the Biology major and a chemistry minor—will keep increases in credit counts to no more than six to nine hours. See Appendix E for a model curriculum for a Biochemistry major. On the other hand, Biology students will be free to minor in Sociology or Music, for example, if they are willing to do the credit hours required. Interdisciplinary groups of faculty will be invited to propose interdisciplinary concentrations to increase the choice of minors and certificate programs. If an existing minor or certificate requires less than 18 hours, the major advisor may require the student to augment the concentration by an appropriate course or courses.

**Community College Transfers**

Since transfer students make up an important part of the UMBC student body, the question of articulation and coherence between the community college curriculum and the honors university curriculum the Task Force is proposing is a crucial one. In the Winter 2000 issue of the journal Peer Review (published by the Association of American Colleges and Universities), a number of educators warn against the depressing effect of state transfer agreements on general education reform. They urge the quest for creative solutions—some of which they provide—to counter this depressing effect. In search of such solutions and in response to the understandable concern expressed by several department chairs about the fit between the two curricula, the Provost has scheduled meetings in June with the chief academic and articulation officers of the surrounding community colleges. UMBC's own procedures in evaluating transfer transcripts will also need to be reexamined. Additionally, the Task Force recommendations for a bridge program and a "gateway" course for transfer students ("Introduction to the Honors University") as well as the proposed peer and faculty mentoring should do much to smooth the transition to UNIBC for transfer students.
In relation to present articulation agreements, MHEC regulations permit senior institutions to require 10-16 additional general education credits beyond the general education program of 30-36 credits required for the Associate of Arts or Sciences (AA or AS) at the community college. The Task Force believes that this window is sufficient to allow the application of the functional area requirement to community college transfers based upon an evaluation of the individual transfer student's transcript. So, for instance, a student with an AA degree but no history course and nothing that would qualify as an Ethical Thinking encounter would be required to fulfill those requirements. The same student might likely have to meet the Experiential Learning encounter and, possibly, an additional Writing course. These additional twelve hours would be within (or just beyond) the window of additional general education credits permitted and would, at the same time, be within (or just beyond) the 46 hours maximum mandated by MHEC for general education courses. Where the combination of general education credits from the community college and the encounter deficiencies noted total more than 46 hours, some accommodations may have to be made. The secondary concentration is not part of the general education program and so will not be limited by MHEC general education regulations. It is important, however, for prospective transfer students to be as aware of the requirements for a secondary concentration as for the major they are contemplating.

Other Transfer Students

Transfers from senior institutions with up to 90 credits would be evaluated on an individual basis with appropriate allowances made for problematic situations.

The Complexity of the Proposed UMBC Matrix

As the integrated curriculum is implemented in Fall 2002 (AY 2003), it is foreseen that it will be supported by an electronic tracking system, a number of new orientation practices, energetic mentoring by faculty and peers (with proper recompense and recognition), and by organizational expertise provided by new administrative structures. Specifically, the new resources will include:

- the Student Information System (SIS)
- summer bridge programs and first-year/gateway seminars
- quality faculty mentoring
- matching incoming students with peer mentors
- administrative structures directing the first-year experience and undergraduate education.
Additionally, the appointment of a director for the Office of Faculty Development at UMBC in summer 2000 will provide structure for the curricular development that will accompany the proposed integrated curriculum.

**Conclusion**

In the draft of a document that the PCOUP Subcommittee on the Undergraduate Experience intended for distribution to the department chairs four years ago, we find the following statement:

If you have not seen the Middle States team's report, you may be interested to know that the reviewers found the "honors university" idea intriguing. While noting that we are "still exploring what this designation might entail," they state that "the 'honors university' aspiration is bold, admirable and appropriate to UMBC. There are formidable obstacles in the way of its full realization, however, and it will take imaginative assessment, careful planning, multiple and creative initiatives, and good luck to surmount them."

Agreeing with the earlier subcommittee's view that an honors university is "an institution that allows students an unusual range of options for distinctive research, work, and service experiences," the Task Force forged proposals that will bring UMBC closer to transforming its aspirations to be an honors university into concrete practices. Dialogue and careful planning are being proposed to surmount the obstacles. It is not by chance that the late Adam Yarmolinsky, while serving as Provost at UMBC, entitled the chapter he was then writing for his Rethinking Liberal Education "Constraints and Opportunities." We are fortunate that UMBC is now at a juncture in which we need no longer let the constraints block the opportunities for the honors university education it has been our tradition and our wish to establish for students from the first pioneering class of 1970 to those graduating into the new millennium.

Reaffirming its focus on extending the rigorous ways of learning that are options for students in select programs at UMBC to a wider student body, the Task Force calls for establishing a culture of academic integrity; an honors environment fostering intellectual curiosity, linking creativity and inquiry from laboratory and laptop to performance hall and studio, and valuing intercultural understanding and the quest for social justice; it calls for implementing, within the next three years, first-year experiences, an integrated honors university curriculum, and structural units guaranteeing their functioning that would enable all UMBC students—whether they enter as freshmen or transfer students—to graduate with the desirable characteristics we have identified for twenty-first century graduates of a public honors research university.
In three years we call for I-JN’IBC to have in place the requirements and opportunities, the academic environment and support that will motivate all students to work at an honors level in preparation for a conceptually, socially, and technologically complex and interconnected world increasingly in need of people with trained minds and hearts.

References:


Field, Thomas. PCOUP Subcommittee on the Undergraduate Experience Draft Questionnaire for Department Chairs. May 1996.


Maryland Higher Education Commission. "Articulation and Transfer in Maryland".

http://mhec.stac.usmd.edu/plnl1.html#artsys


A Moveable Feast? Curricular Coherence and Student Transfer. Winter 2000 issue of Peer Review 2.2. [A journal on new ideas and practices in undergraduate education published by the Association of American Colleges and Universities].


## Appendix A

**AN INTEGRATIVE MODEL FOR A CORE CURRICULUM** (Third Revision)

<table>
<thead>
<tr>
<th>Areas of Knowledge (a)</th>
<th>Critical &amp; Analytical Thinking</th>
<th>Competencies</th>
<th>Experiential Learning</th>
<th>Focused Inquiries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantitative, Deductive &amp; Inductive Reasoning</td>
<td>Interpretive &amp; Aesthetic Analysis</td>
<td>Writing</td>
<td>Information Technology</td>
</tr>
<tr>
<td>Arts &amp; Humanities 3 (b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language &amp; Culture 1-3 (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences 3 (b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological/Physical Sciences 2 (d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (e)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Encounters Required (t)</td>
<td>2</td>
<td>2</td>
<td>2*</td>
<td>1</td>
</tr>
</tbody>
</table>
(a) Courses are designated with regard to their Area(s) of Knowledge. Courses can be counted toward only one area.

(b) Courses from two disciplines are required.

(c) The language-culture requirement consists of competence in a language through the 201 level plus one or two additional courses in either Culture or ("L") beyond the 201 level. (Upper level 'L' courses are content-based.) BS & BSE students may substitute one course beyond the 201 level with a MS course in Mathematics.

(d) One course must be lab based.

(e) Courses offering encounters with Critical and Analytical Thinking, Competencies, Experiential Learning, and Focused Inquiries that do not count toward the current or proposed Areas of Knowledge courses.

(f) Courses may carry up to three encounter designations, but may count for no more than two in any student's program.

* An additional "Writing in the Disciplines" requirement, to be developed, will raise this exposure total to 3.
Appendix B

Desirable Characteristics of Graduates of a Public Honors Research University

October 1999

The following characteristics are. Derived from the 1999 Vision and Values statement prepared by the Planning Leadership Committee and the Committee's charge to the Task Force: UMBC's present graduation requirements; the input provided by participants at the August 1999 Presidential Retreat; Task Force discussions; and the 1996 responses by members Of the PCOUP Subcommittee on the Undergraduate Experience:

1. Graduates in all disciplines should be able to think Their critical skills should include quantitative reasoning interpretative and esthetic analysis of information and the products of human culture, and ethical thinking.

2. Students should be able to communicate effectively by developing strong •skills in writing and reading speaking and listening.

3. Graduates in all disciplines should demonstrate technology literacy and the ability to understand the social implications of technology.

4. Students should be civically literate and socially conscious. They should be able to integrate ethics and the values of citizenship into their lives. They will have learned about the forces that lead to conditions of persistent poverty in the face of increasing wealth, environmental issues, healthcare, substance abuse, violence, and political corruption. Students should be provided with opportunities for community service and civic engagement

5. Students should be able to apply knowledge to real-world problems and have an understanding of career paths for which they are suited. To that effect they should be provided with hands, on, problem-based experiences and undergraduate research, internship, and cooperative education opportunities.
6. Graduates should have foundational subject-matter knowledge in the major disciplines and experience with the methods used to approach essential questions in the arts and humanities, social sciences, mathematics, and the biological and physical sciences.

7. An honors university should provide students with increased knowledge, understanding, and appreciation of peoples and cultures different from their own. They should have proficiency in a second language and culture at the intermediate level. Graduates should appreciate that living in a culturally diverse world means both the necessity for tolerance of Other ways of doing things and the opportunity for personal enrichment of one’s own way of doing things.

8. Graduates should have a global perspective and be reasonably conversant with what is going on around the world and be convinced of the necessity of maintaining this awareness throughout their lives.

9. Students should have a historical perspective and the ability to view the long-term effects and implications of individual and social actions—economic, environmental, and social.

10. Graduates should have the ability to make connections across disciplines.

11. Students should understand the basic concepts of healthy living.

12. Students should have life-long learning skills: the skills and tools to retrieve information, define and solve problems, and assess knowledge so that they can function in a complex, changing world.

13. Graduates should have in-depth knowledge of a field of study. Major disciplines should provide gateway courses, departmental honors programs, and research and capstone experiences.

14. The students' social skills should be developed through participation in extracurricular activities.

15. Honors University graduates shall understand the difference between "need" and "want," "means" and "ends" and rights and privileges, on the one hand, and responsibilities, on the other.
16. The graduate of all honors university feels passionate about something and has enhanced this passionate interest at IJMBC.

Appendix C

From Duke University’s Curriculum 2000 Report

MODES OF INQUIRY

In addition to keas of Knowledge, Curriculum 2000 also organizes the curriculum in terms of Modes of Inquiry. There are many ways to acquire, transform, and communicate knowledge, and to reach understanding. The array of academic disciplines reflects this diversity in modes of inquiry. Underlying the diversity is a spectrum anchored, at one end, with reasoning rooted in logic and mathematics and, on the other, with approaches to knowledge which emphasize interpretation and the interaction between interpretation and aesthetic sensibility.

It is essential that our students be aware of this diversity and adept with several modes of inquiry. We have chosen to organize the relatively broad and familiar modes of inquiry around the BYO anchors: Quantitative, Inductive, and Deductive, Reasoning (QDR); and Interpretative and Aesthetic Approaches (IAA).

These modes of inquiry axe associated differentially but not exclusively with the areas of knowledge and with their constituent disciplines. Mathematics and the Natural Sciences axe most strongly associated with QIDR and the Humanities with IAA. The Social Sciences are associated with QDR and also interpretative reasoning. Consequently, courses from a number of disciplines can provide exposure to each of the modes of inquiry.

There are two modes of inquiry: 1) Quantitative, Inductive, and Deductive Reasoning and 2) Interpretive and Aesthetic Approaches. For each of these two Modes of Inquiry, as well as for the Focused Inquiries and Competencies described below, the committee has defined a rationale, a set of objectives, the requirement, and the criteria by which courses qualify to meet the requirement. Objectives are the learning outcomes we seek to promote. Criteria establish the conditions under which a course can qualify for a mode of Inquiry, competency, or field of inquiry designation.
Quantitative, Inductive, and Deductive Reasoning (OR)

Rationale:
QIDR encompasses three broad areas: data acquisition and description; quantitative methods; and concepts or frameworks of deductive and inductive reasoning. QIDR forms the cornerstone of mathematics, the physical, computational, and biological sciences, and many aspects of the social sciences. It plays an essential and role in our increasingly technological society, as well as in the formation and desig of political and economic policies that profoundly affect quality of life. Consequently, a familiarity with the body of ideas and techniques that constitute QIDR is an essential part of what it means to be an educated person today.

Just as important as the knowledge of QIDR techniques is an awareness of their limitations and the possibility of their improper application. This is essential, even for those whose careers not directly involve quantitative applications; it is important, for example, for students to understand how truth claims based on quantitative reasoning are developed and contested, as well as why there can be (and often are) conflicting views on important issues, each of which may be based on quantitative analyses of the same available data.

Objectives:
We seek for students to acquire:

- knowledge of the requirements for reliable and valid data, its description and the conditions for valid descriptive and casual inference
- understanding of descriptive and inferential statistical methods and their use in analyzing data and testing hypotheses comprehension of the concepts and constructions of mathematical models
- knowledge about application of analytic techniques, such as calculus, to those models. A student should learn not only to compute solutions to problems designed to teach these techniques, but also how to decide when these techniques are appropriate.
- engagement with the process of deductive or inductive reasoning itself in courses, such as philosophy, that concern formal logic and its place in reasoning
- experience particular formal systems, such as computer prcVam.1N.ng or music composition, where a system of formal rules serves as a framework for creative work
Requirement:
Students must complete two QIDR exposures, one of which must meet Criterion I.

Criteria:
A course offering exposure in QDR meets one of the following conditions:

1. It has as its main purpose instruction in a quantitative skill, such as proficiency in some aspect of mathematics, statistics, or computer science. Among its secondary purposes should be the development of an understanding of appropriate uses of such techniques.

2. It emphasizes instruction in the practice of working in a deductive, inductive, or formal system, such as computer programming or linguistics, symbolic logic, or music theory/composition.

3. It emphasizes the development and critical evaluation of mathematical or deductive/inductive models appropriate to the analysis of problems in a particular field, such as the sciences (natural and social), engineering, or mathematics.

Interpretative and Aesthetic Approaches (IAA)

Rationale:
A curriculum aiming at an integral education of the person is incomplete without offering exposure to ways of understanding which are primarily experiential and interpretive. The understanding of cultural modes of expression can be active and performative as in theater, dance, music, the visual arts, and creative writing, or interpretative and hermeneutic, as in literary and cultural studies, the history of art, philosophy, and religious studies.

Objectives:
Duke aims for students to develop an awareness and appreciation of the styles, designs, performances, arts, and narratives by which societies — in this and other cultures — organize their lives. The objective here is for students to be able to experience, perform, and interpret specific social texts, historical events, and cultural practices. We seek for students to:
• experience and understand specific arts, performances, or practices in terms of their stylistic modes and/or histories
• engage with conceptual tools developed in various disciplines as well as across disciplines to study the styles, meanings, and effects of expressive behavior
• study critical and theoretical perspectives for unraveling the complexities between practice and composition of expressive arts and texts-

Requirements:
Students must complete two LAA exposures.

Criteria:
A course offering exposure in IAA meets at least one of the following conditions:
1. It involves experience of creative practice (as in the arts), as a means to develop aesthetic understanding of human interactions and creativity.
2. It emphasizes explicit instruction in the philosophies and methods of understanding in the humanities in relation to other modes of inquiry-
3. It stresses the teaching of how to construct interpretative arguments.
4. It focuses on the teaching of critical interpretation as a method of understanding texts, practices, or artifacts within a social, religious, political, or historical context.

FOCUSED INQUIRY
In addition to Modes of Inquiry, there are important cross-cutting intellectual themes about which Duke students need to be knowledgeable. These themes represent enduring focal points of inquiry and application of knowledge to which many disciplines speak. The three areas of focused inquiry are: 1) Cross Cultural; 2) Science, Technology and Society; and 3) Ethical Inquiry. We have selected these themes for focused inquiry because of expectation that Duke students will need to address these issues throughout their lives and careers, and because Duke's faculty is well-poised to address them.
Cross Cultural Inquiry (CCI)

Rationale:
Globalization is reshaping political and economic regimes as well as social and cultural relations in the United States and throughout the world. Students living and working in the 21st century need to become aware of the ways in which different and shifting political economies, cultural identities, and social issues and conflicts are negotiated. To be successful, Duke students need formal and academic experience in the processes of exploring, understanding, and analyzing differences among peoples and among social systems within both national and international contexts,

CCI provides an academic engagement with the dynamics and interactions of culture(s) in a comparative or analytic perspective. This type of inquiry provides a scholarly, comparative, and integrative study of political, economic, aesthetic, social and cultural differences. It seeks to provide students with the tools to identify culture and cultural difference across time or place, between or within national boundaries. This includes but is not limited to the interplay between and among material circumstances, political economies, scientific understandings, social and aesthetic representations, and the relations between difference/diversity and power and privilege within and across societies. CCI encourages critical and responsible attention to issues of identity, diversity, globalization, and power so that students may evaluate complex and difficult issues from multiple perspectives. In fulfilling the CCI requirement, students are encouraged to undertake comparisons that extend beyond national boundaries and their own national cultures and to explore the impact of increasing globalization.

Objectives:
We seek for students to:

- increase understanding of the ways in which identities and notions of difference are constructed, reinforced and changed
- develop an understanding of different national cultures, institutions, and policies and the ways that these are being affected by and, in turn, influencing global processes
- recognize stereotypes and to evaluate critically complex and competing ideas about individual and group differences
- understand the processes by which categories of difference change over time and in relationship to material circumstances, political economies, social
• and privilege and social and cultural definitions of justice and right
• explore the role of scientific, medical, religious, aesthetic, legal and other modes of analysis in constructing notions of difference and diversity in particular cultures and societies
• examine commonly accepted notions of the normative through analyses of cultural systems, political economies, and social relations

**Requirement:**

Students must complete two CCI exposures.

**Criteria:**

A course offering exposure in CCI meets both of the following conditions:

1. Courses investigate culture and identity as they are socially constructed through nationality, relations of race, gender, ethnicity, class, sexuality and/or shared world views (behavior, arts, beliefs and institutions).
2. Courses have either a significant explicit and systematically comparative component across different national or cultural groups or across distinctively different historical periods; or an in-depth, intensive examination of a given cultural group, cultural region, or nation in a comparative or analytic perspective.

**Science, Technology, and Society (STS)**

**Rationale:**

Advances in science and technology have wrought profound changes in the structure of society in the modern era. They have fundamentally changed our world, both its philosophical foundations, as in the Copernican or Darwinian revolutions, and in its practical everyday experience, as in the rise of the automobile and television. In the second half of the 20th century, the pace of such change has accelerated dramatically, and we have every reason to believe that science and technology will play an even greater role in shaping society in the coming century.

If Duke is to prepare its graduates to critically analyze and evaluate the scientific and technological issues that confront them and to understand the world around them, they will need exposure to basic scientific concepts and to the processes by which scientific and technological advances are made and incorporated
into society. They must come to understand the interplay between science, technology and society that is, how science and technology and society have influenced the direction and development of society and, conversely, how the needs of society have influenced the direction of science and technology. Grappling with this interplay is essential for understanding both the outcomes of the basic scientific enterprise and how they apply to everyday life.

**Objectives:**

We seek for students to:

- know the historical and/or philosophical development of a given scientific or technological subject-
  Students need to develop the analytical skills necessary to examine the scientific, political, and/or societal factors that ultimately came to bear on the development and application of the particular topic.
- understand contemporary issues relating to the development and application of a particular area of science and technology. Exposures should address current and future issues by critically assessing the aesthetic, ethical, sociological, and political, in addition to scientific, factors that bear on the issue.

**Requirement:**

Students will complete OYO STS exposures.

**Criteria:**

A course offering exposure STS meets one-of the following conditions:

1. It examines in a sustained fashion the impact of major scientific or technological developments on political, economic, philosophical, ecological, or sociological aspects of society.
2. It addresses in a sustained fashion the historical, social, political, and/or economic roots of scientific or technological fields or phenomena
Appendix D

Proposed University Requirement in Writing and Technology

DRAFT - Revision date: April 10, 2000

Overview

1. All first-year students at UMBC will complete a six-credit university writing requirement that will be technology enriched.

2. This requirement will be completed over two consecutive semesters, normally three credits of ENGL 100 in Fall and three credits of ENGL 101 in Spring.

3. Transfer students who have finished three of the six credits for the requirement in writing and technology must complete the last three credits. These students may fulfill the requirement by completing ENGL 101 or an equivalent course that is writing and technology intensive. Transfer students who have already taken six credits of writing elsewhere will have fulfilled UMBC’s requirement.

Rationale

The existing university requirement in writing is three credits of ENGL 100 or an equivalent course that must be completed before a student finishes the sophomore year. The proposed new six-credit requirement will place all entering freshmen in ENGL 100 for their first semester at UMBC, ensuring that they will be optimally prepared to analyze information, conduct research, and write effectively for their subsequent college work. This emphasis on propaedeutic writing instruction complements and reinforces recent MHEC guidelines for the evaluation of first-year writing performance.

The second semester of this six-credit requirement will further refine students' abilities as writers, generally to enhance their research skills and specifically to augment their understanding and application of technology for information literacy. Consistent with UMBC’s mission, our students should be proficient users of information technology: they should when and how to cite online documents, where to locate relevant web-based sources, and what to do when problems arise that impede the communication of their own ideas. At the very least, first-year students at UMBC should be literate users of technology for the enrichment of their education.
The need for more writing instruction has been firmly endorsed by JNCC administration and faculty. In AY 1997-98 an ad hoc Provost' committee with representation from across campus, including deans, department chairs, and a cross-section of faculty, unanimously endorsed a proposal for a change in the university writing requirement from three credits to six credits. This change to a full year of writing offers students a much stronger foundation for later academic achievement because they will have more opportunity to consolidate skills and to correct deficiencies. The proposed change also enables teachers to promptly identify students who may be at risk academically and who can then be referred to the appropriate support services. Early and prompt intervention thus enables UMBC to improve student retention.

Equally important, the expanded requirement alerts students to the close relationship between writing and technology, not only for academic success in college but also beyond college for their career advancement. No other campus in Maryland expressly endorses in its university requirements the importance of technology as a literacy skill comparable to writing.

UMBC now has the opportunity to further establish its technology mission — and to promote its identity as an Honors University — by adopting a more rigorous and ultimately more distinctive university requirement in writing and technology.

**Key Advantages**

- More writing instruction for academic success
- Better compliance with NIHEC for evaluation of first-year writing
- Better career preparation
- Enhanced student retention
- Technology enriched curriculum
- Distinctive university requirement for an Honors University with technology identity
Goals for English 100T and English 101 T

First Semester: English 100T
- Students will read, write, and talk about technological issues to prepare them to be critical participants in society.
- Students will be able to generate material and original ideas and to develop a diesis statement and support to create essays that are narrative, responsive, and persuasive.
- Students will develop the technological facility to access email, participate in listserv activities, and visit and evaluate websites.
- Students will be able to analyze and synthesize material from several sources (print, electronic, and/or primary research) to develop an argument.
- Students will use language effectively and correctly to communicate complex ideas, Students will extend mastery of effective writing processes.

Second Semester: English 101 T
- Students will develop a program of rhetorical and critical skills from first to second semester.
- Students will learn to conduct research using libraries, field research, and on-line sources.
- Students will learn to choose an appropriate research topic, discover and analyze sources, and write convincingly on that subject.
- Students will learn to judge the appropriateness and effectiveness of assertions and evidence in evaluating texts.
- Students will complete a collaborative project in which they will learn to participate in team/group processes.
- Students will develop a familiarity with visual literacies, such as tables, images, figures, illustrations, and graphics.
- Students will critically analyze the issues surrounding the use of technology in our society.
Appendix E

Model Curriculum for a Biochemistry Major (B.S.)

I. Major requirements:
   a. Chemistry: 27 credits
   b. Biology 15 credits
   c. Biochemistry 12 credits
   d. Approved Electives in Biology and Chemistry 6-8 credits
   e. Mathematics and Physics 16 credits
   f. Individual lab research (recommended) 1-4 credits

If the student completes a 3-credit recommended independent research project (F) and 7 credits under D., then the total comes to 80.

If the student does not complete the research project, he or she could substitute one of the experiential courses and still remain within the 80 credits.

II. Secondary Concentration

Since Biochemistry majors are already required to take 16 credits in Mathematics and Physics and a number of approved electives, the requirements for a secondary (interdisciplinary) concentration are largely met.

III. Remaining General Studies Requirements

   a. Writing and Technology 6 credits
   b. Arts & Humanities intersecting with Interpretive & Aesthetic Analysis and Ethical Inquiry 9 credits
   c. Language & Culture intersecting with Cross-Cultural Inquiry 3-8 credits
   d. Social and Behavioral Sciences intersecting with Historical Inquiry, Science, Technology, & Society, and perhaps one Quantitative, Deductive, and Inductive Reasoning course 9 credits

Because of the fluctuations in the Language & Culture part of the requirements, the total here will amount to between 27 and 32 credits. If one assumes that the Quantitative, Deductive & Inductive Reasoning
component will have been met by courses in the major or secondary concentration, then all requirements will have been completed within the 80 major/secondary concentration credits + 27-32 general studies credits. That doesn't leave room for many electives (8 to 13 credits), but that can't be expected with an 80-credit major. The only additional credit requirement over the present GFRs is the 3-credit additional writing and technology course.