

North Carolina State University

**General Education Plan
Effective Summer II 2009**

**Presented by the
General Education Review
Task Force (GERTF)
June 29, 2007**

**Approved by the Provost
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General Education Plan
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Executive Summary **General Education Plan**

I Executive Summary

In October 2004, the Provost charged the General Education Task Force (GERTF) with reviewing the current General Education Requirements (GER) and making recommendations on revising the program, the benefits of changes to the current program, an implementation plan for any proposed revisions, the costs of any proposed recommendations, and an assessment plan. The GERTF began meeting during the fall of 2004 and conducted a review of our current GER with input from across campus which included faculty, students, and college administrators. In addition, the General Education Programs of our peer institutions were reviewed. With this, the Task Force developed proposed mission statements for undergraduate and general education at NC State as well as a rationale for a new General Education Plan (GEP). The proposed mission statements and rationale for general education was then presented to the campus for input and discussion.

With the input from the campus community, the GERTF developed a proposal for a new General Education Plan (GEP) which was presented to the campus community in the fall of 2006. Input was solicited from as many groups as possible and presentations were made to the Faculty Senate, Student Senate, Council of Associate Deans, Vice-Provosts, various colleges and departmental groups, and others. A web site was also in-place to collect recommendations from individuals. At the end of this process, the proposed GEP was again modified after extensive discussion within the GERTF and further discussion between the GERTF and various campus groups and individuals. A general presentation of the new GEP was presented to the College Deans and the Provost in December of 2006. At that meeting, the GERTF was instructed to continue developing and fine tuning the proposed GEP and to present a final proposal to the Provost.

This proposal is the result of 30 months of work by the GERTF in developing a new General Education Plan. The GERTF believes that this proposed GEP has many strengths and advantages over the current GER such as the following:

1. The number of required credit hours is reduced from the current 50-53 hours to 39-40 hours.
2. The proposed GEP emphasizes the strengths of NC State and its varied course offerings.
3. The proposed GEP provides all of the colleges and academic departments with the opportunity to review their current degree programs and make any necessary changes as a result. The type of changes may include a reduction in total hours to graduation, an adjustment in the courses currently required for graduation, and an increase or decrease in courses

required as part of the major requirements. The GEP will also provide the opportunity to coordinate degree programs to allow students to more easily complete dual degrees, honors programs, minors, and other NC State offerings.

4. The proposed GEP is portable for our students. No additional GEP courses will be required when students elect to change their major. These students may have to take additional courses in subjects such as mathematics or the sciences to complete the requirements of their new degree program, but such changes would not be driven by the GEP. As a result, intra-campus transfers will be easier for our students.
5. The proposed GEP is flexible. Opportunities will be available for faculty to develop truly interdisciplinary courses, thematic tracks to provide more coherency, and for the University to make adjustments as a result of ongoing assessment. .
6. The proposed GEP broadens the scope of our general education program to include diversity, global knowledge, and interdisciplinary courses as required components of a student's program.
7. Colleges and academic departments are encouraged to develop courses for the GEP categories.

The GERTF recommends that the implementation date of the proposed GEP be the Fall 2009 semester. Students who enroll at NC State as a degree seeking student after summer session 1, 2009 would be covered by the new GEP. Students who enrolled at NC State prior to that time would continue under the current General Education Program. Preparation for implementation of the new GEP will require modification and subsequent University approval of all degree programs, the development of new courses for all categories with emphasis on new GEP categories, such as the U.S. Diversity, Global Knowledge, and Interdisciplinary Perspectives. The Council on Undergraduate Education must develop objectives for some categories, develop necessary procedures and approve all courses for placement into the different categories. In addition, the assessment of programs will be further enhanced and training of faculty will be provided to assess the new GEP and its categories.

Finally, the GERTF strongly recommends this plan, if it is accepted, not be viewed as a rigid structure for general education at NC State University. Instead, we recommend that the GEP be reviewed on regular cycle and assessment data collected be shared with the appropriate University committees (such as CUE and UCCC) and the campus community to continually improve our general education plan.

General Education Review Task Force

II Overview

The General Education Review Task Force (GERTF) began meeting in October 2004 to carry out the Provost's charge to review the "entire GER, including purpose, structure, function, and assessment" and to craft the recommendations called for in that charge (see Appendix A, "Charge to UGA for GER Review" and Appendix B for the GERTF roster). Our current GER (General Education Requirements) is what is commonly referred to as a "cafeteria approach", in which students choose courses from a series of menus (see Appendix C). This is similar in many ways to the general education structures of our peers (see Appendix D), and in fact is similar to what is in place at all but a handful of doctoral/research extensive institutions. However, our current system is also unique in the number of hours of course work required (50 to 53 credit hours, compared to an average of 40 credit hours at our peers) and in the requirement that students complete an STS (Science, Technology, and Society) course. There are, of course, other differences and similarities.

During its nearly 30 months of existence, the GERTF has gathered information and opinions about the current GER and examined a wide range of approaches to providing a sound, fundamental general education to all NC State students. Initially, a Rationale and a Mission Statement (see Appendix E) for general education were developed and brought to the campus community. After receiving feedback about these documents, the TF then began to examine specific models and proposals for a new general education system. In the fall of 2006, a consensus was reached and a proposal was brought to the faculty (see Appendix F for details). In addition to the meetings with various faculty groups outlined in Appendix F, an electronic feedback system was developed so that individual faculty members, staff members, and students could comment on the proposal. Finally, all of the colleges were asked to submit a response to the proposal. This feedback can be accessed on the GERTF web site (http://www.ncsu.edu/uap/committees/gertf/ger_feedback.html). Based on these responses to the proposal, the TF revised that proposal and this proposal for a new General Education Program (GEP) is the result. While it may appear that the TF took an inordinate amount of time to reach this point in the process, readers are advised that the current GER took approximately fifteen years to develop, beginning with a Provost's Forum in 1978 and continuing until the current system was implemented in 1994. From 1994 until 2004, a number of significant changes were made to the GER (see Appendix G). When the Provost charged UGA (now DUAP) with reviewing the GER a moratorium was placed on major changes to the existing system.

General education has been defined in many different ways and used to describe a wide variety of programs in higher education. Such programs run the gamut from "exposure to the disciplines," in which students take a specified number of courses outside of their major, to the "core curriculum," in which every

student at takes the same set of general education courses. A small number of institutions have no formal general education program, instead allowing students to decide on their own how to fashion their curriculum beyond their major.¹

Despite this diversity, nearly everyone in higher education agrees that it is critical for students to gain an understanding of how a variety of disciplines approach questions and problems. The challenge is to achieve that goal in a way that best fits the needs of both the students and the mission of a particular institution. The GERTF accepted that challenge.

The current proposal (outlined in greater detail below) retains the "cafeteria" approach in which students select from courses in a variety of categories. While the TF considered a number of other approaches, some of which entailed radically different structures, it eventually concluded that the menu approach is most compatible with the decentralized nature of NC State and emphasizes the strengths of the research university. Categories in the core disciplines of Mathematics, Natural Sciences, Humanities, Writing, and Social Sciences have been preserved. TF members agreed that students need a strong background in each of these areas in order to enhance their intellectual engagement in their majors, prepare them for the changing demands of professional careers, equip them for a lifetime of learning, and lay the foundation for involvement in their communities as responsible citizens and leaders.

The proposal also introduces some new elements into general education at NC State, an interdisciplinary category, a co-requisite in U.S. Diversity, a co-requisite in Global Knowledge, and the opportunity for students to satisfy a portion of their general education through completion of a thematic track. Courses in the interdisciplinary category and the thematic track are intended to prepare students for a complex world that will require them to integrate the knowledge and skills that they learn in their majors with the broader understanding of multiple modes of inquiry that they will acquire through general education. The implications of globalization for individuals and societies are increasingly important, and the co-requisites are intended to provide students with a deeper understanding of both the world beyond our borders and the interactions between people from different cultures and racial and ethnic groups within our borders.

Finally, the TF decided to reduce the number of hours required in general education from 50-53 credit hours to 39-40 credit hours. A review of our peer institutions revealed that none of them had a general education program the size of our current one. In reducing the number of hours, the TF had a number of goals, the first being the student graduation rate. It is the hope of the TF that the reduced GEP will enable more students to graduate in four years. But perhaps

¹ The Southern Associate of Colleges and Schools requires that its member institutions define a thirty semester credit hour general education curriculum, so this is not a viable option for NC State.

more importantly, the TF saw this change as a means of giving students more choice in building their academic programs. Many majors currently have few or no free electives; it was the intention of the TF that the freed hours would enable students to choose courses, as well as minors or themes, that would complement and enhance students' education in their majors.

| | Current GER | Proposed GEP |
|--|--------------|---|
| Credit Hours | 50 - 53 | 39 - 40 |
| Portability | Some limits | GEP as a program is completely portable |
| Double-counting | Allowed | Allowed |
| Categories | | |
| (a) English 101 | 4 | 4 |
| (b) Humanities/Soc Sci | 21 | 12 |
| (c) Math/Nat Sci | 20 | 13 |
| (d) Add'l Breadth | NA | 3 |
| (e) Interdisciplinary Persp | NA | 5 - 6 |
| (f) Science, Technology & Society (STS) | 3 | 0 (moved to Interdisciplinary Perspectives (IP)) |
| (g) PE | 2 | 2 (called PE/Healthy Living) |
| (h) Non-English culture "Global Knowledge" | Co-requisite | Co-requisite re-titled and refocused as <i>Global Knowledge</i> |
| (i) U.S. Diversity | NA | Co-requisite |
| (j) Advanced Comm | 3 | 0 (College Responsibility) |
| (k) Foreign Language | Proficiency | Proficiency |
| (l) Computer Literacy | Proficiency | College Responsibility |
| Thematic Tracks | NA | Optional |

The GERTF recommends that, if accepted, this proposed new General Education Program (GEP) be implemented for new students in the fall semester of 2009. As is described more fully in the "Implementation" section of this report, there is a considerable amount of work yet to be completed before a new GEP can be rolled out. There are several new categories that must be populated with appropriate courses, a process that will take some time as it is anticipated that new courses will have to be developed. Those new courses must be vetted by both CUE and UCCC after faculty members develop them. The most time consuming aspect of the adoption of a new GEP is that every curriculum on campus must be changed to reflect the new general education requirements. While DUAP will work with the UCCC, CUE, and EMAS to expedite this process; it is in the long-term best interest of the University to allow time for appropriate consideration of these important changes. While implementing the new GEP solely for new students in the fall of 2009 (after summer session 1) relieves some of the pressure of these development efforts, it is also true that having two dissimilar general education curricula in place simultaneously will generate confusion for all. The GERTF considered this issue very carefully, weighing the benefits against the costs of delaying full implementation beyond 2009, and concluded that the proposed implementation timeline is the best option.

III. Proposal for the General Education Program

Basic Structure

English 101 (4 credit hours)

The TF recommends no changes to this requirement.

Humanities (6 credit hours)

The TF recommends that students be required to successfully complete two courses from two different fields of study. The current objectives for this category (but not the sub-categories) should be retained, with an opportunity for faculties in the humanities to review them.

Social Sciences (6 credit hours)

The TF recommends that students be required to successfully complete two courses from two different fields of study. The current objectives for this category (but not the sub-categories) should be retained, with an opportunity for faculties in the social sciences to review them.

Mathematical Sciences (6 credit hours)

The current category objectives should be retained. Students must take at least one course with an MA or ST prefix.

Natural Sciences (7 credit hours)

The current category objectives should be retained. At least one of the courses that students take must include a laboratory.

Additional Breadth (3 credit hours)

Students will be required to successfully complete an additional general education course outside of their major and related disciplines. Students in disciplines that are primarily focused on natural science, mathematics, or engineering will take an additional course from the Humanities, Social Sciences, or Visual and Performing Arts lists; students in disciplines that are primarily focused on the Humanities or Social Sciences will take an additional course from the Mathematics, Natural Sciences, or Engineering lists.² As many programs do not fall neatly into one or the other of these categories, colleges will decide with the approval of the Associate Dean of DUAP which categories will satisfy the Additional Breadth requirement for students in each of their programs.

Interdisciplinary Perspectives (5 – 6 credit hours)

- The courses must include sustained, rigorous and substantive instruction that focuses on the content and approaches of two or more disciplines (from any college(s)). At least one of the two courses students take must include sustained, rigorous and substantive instruction that focuses on the content and approaches of at least one discipline from the humanities/social sciences and at least one discipline from

² An Engineering list must be developed. See "Implementation" section of this report for details.

mathematics/natural sciences/engineering/technology. All colleges and departments are encouraged to develop appropriate courses for the Interdisciplinary Perspectives list.³

- Alternatively, students may enroll in two linked courses that address one or more specific themes, topics, issues, cultures or problems, one from the humanities/social sciences/visual and performing arts and one from mathematics/natural sciences/engineering/technology. To satisfy the requirement by this means, the two instructors must sustain collaboration and demonstrate that the two courses are interrelated (for instance, by demonstrating that the content coverage is coordinated over the semester, or by demonstrating that the syllabi and reading lists clearly reflect the interdisciplinary nature of the courses). Students would have to complete both courses in a single semester to satisfy this requirement. Such linkings would be submitted to CUE for approval on the Interdisciplinary List.

Rationale:

Interdisciplinary study provides students with the opportunity to synthesize knowledge and skills essential to the understanding of complex problems, to make connections between fields of study, to consider more than one disciplinary approach or methodology, and to bring to bear the insights from two or more disciplines in examining and/or responding to the complex problems facing our world.

Objectives:

Each course in Interdisciplinary Perspectives will provide instruction and guidance that help students to:

1. explore and synthesize the approaches or views of two or more disciplines; and
2. identify and apply authentic connections between two or more disciplines; and
3. distinguish between the essential concepts of the individual disciplines.

Physical Education/Healthy Living (2 credit hours)

The TF recommends that the current objectives be retained for this category.

U. S. Diversity (1 course, 0 additional credit hours)

This requirement could be met with coursework that focuses on the interrelationship of individuals, racial groups, and cultural groups to understand and appreciate issues of diversity, equality, and structured inequality in the U.S., its institutions, and its cultures.

³ The TF recommends that the STS courses migrate to this list, with the understanding that within three years all of the STS courses would be confirmed for the list only after a review by the Council on Undergraduate Education using the same standards as will be applied to new courses for the list. See "Implementation" for more details.

This co-requisite requirement would only serve to introduce students to this issue and the TF strongly recommends that academic program faculty carefully consider how they may weave these themes throughout their curricula. Many programs already do this quite successfully and could serve as models for others. An initial course list (see Appendix I) was developed and it is anticipated that most of the courses on this list will also satisfy another general education requirement.

Rationale:

The study of diversity in the United States provides students the opportunity to consider questions of difference and culture, identity and community, privilege and oppression, and power and responsibility in our nation, and to gain an understanding of how these issues affect both individuals and communities.

Objectives:

Each course in U.S. Diversity will provide instruction and guidance that help students to achieve 2 or more of the following:

1. Analyze how religions, gender, ethnic, racial, class, sexual orientation, disability, and/or age identity are shaped by cultural and societal influences in contexts of equality and inequality; and
2. Categorize and compare historical, social, political, and economic processes producing diversity, equality, and structured inequalities in the U.S.; and
3. Interpret and evaluate social actions by religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age groups leading to greater equality and social justice in the U.S.; and
4. Apprise and appreciate constructive interactions between people from different cultural, racial, and ethnic groups in the U.S.

Global Knowledge (1 course, 0 additional credit hours)

This requirement could be met through a study abroad experience (with guidelines to be developed) or coursework that focuses on human expression in different cultures, how other cultural traditions have influenced American culture and society, and how cultures in general develop distinctive features and interact with other cultures.

This co-requisite requirement would only serve to introduce students to this issue and the TF strongly recommends that academic program faculty carefully consider how they may weave these themes throughout their curricula. Many programs already do this quite successfully and could serve as models for others. An initial course list (see Appendix I) was developed and it is anticipated that most of the courses on this list will also satisfy another general education requirement.

Rationale:

Global knowledge is necessary for students to understand the world and their place in it. The global knowledge requirement provides students the opportunity to explore the complex interrelationships among nations, to gain a deeper

appreciation of other cultures and peoples, and to evaluate the impact of U.S. culture and policy on the rest of the world.

Objectives:

Each course in Global Knowledge will provide instruction and guidance that help students to achieve at least 2 of the following:

1. Compare systematically the ideas, values, images, cultural artifacts, economic structures, technological developments, or attitudes of people from different societies; and
2. Identify the historical context of ideas and cultural practices and their dynamic relations to other historical contexts; and
3. Explain how a culture changes in response to internal and external pressures.

Advanced Communication

Because writing and speaking are powerful ways of both learning and evaluating learning in the disciplines, each undergraduate curriculum must be designed so that courses in the major help students write and speak competently in the discipline. Writing and speaking competently in a discipline also includes the ability to retrieve, read critically, analyze, evaluate, and manage information in ways that are appropriate to the discipline. In each college, the associate dean for academic affairs will assure that all programs have incorporated writing and speaking outcomes into their curricula.

Foreign Language Proficiency

This requirement may be met by 2 years of C or better in high school foreign language courses or successful completion of FL102. Programs and/or colleges may choose to require further foreign language competency for their students as part of their college or major requirements.

Thematic Tracks

Students will have the option of completing a portion of the General Education Program through a thematic track. Under this option, students choose 4 courses (12 credit hours) from the approved lists that address a single theme or issue from multiple disciplinary perspectives, with at least one of the courses selected from either the Mathematics or Natural Sciences lists and at least one of the courses selected from the Humanities or Social Sciences lists.

This approach would provide three options for students. First, they may choose not to pursue a thematic track and would complete the basic requirements of the General Education Program. Second, they may choose to pursue a thematic track that has been developed by the faculty and approved by CUE. The TF recommends that a procedure be developed whereby students who complete this option would receive transcript notation to that effect. Third, students may in effect create their own thematic track in consultation with their adviser by choosing general education courses that address a single theme. Under this option, students would not receive transcript notation. If there is sufficient student interest, the TF recommends that a procedure be devised

whereby students could develop or suggest tracks that would be considered for approval by CUE. In any case, a student who chooses to pursue a thematic track may opt out at any time without penalty; the only requirement is to complete the General Education Program.

This option allows students to connect knowledge from different disciplinary areas through the focus on a single theme or issue. It is well suited to students who have a well-defined interest in a particular topic and who would benefit by exploring that topic from multiple perspectives. This option is not intended to compete with minors, which require more hours and are with few exceptions centered on a single discipline. However, the TF recommends that students be allowed to count general education courses toward the requirements for a minor where that is appropriate and applicable.

Double Counting

Courses taken to satisfy major requirements may also satisfy General Education Program requirements. Students who change majors will often be required to take additional courses to satisfy major requirements, but the General Education Program itself is portable across the university.

Courses taken to satisfy requirements for a minor may also be used to satisfy General Education Program requirements.

Courses taken to satisfy the General Education Program may not be double counted within GEP categories with the exception of the co-requisites for Diversity and Global Knowledge. Courses in any of the other GEP categories may be used to also satisfy the Diversity and Global Knowledge requirements.

IV. Implementation

The TF recommends that the new General Education Program, if accepted as proposed, be implemented for new (entering) freshmen in Fall 2009. The TF recommends that returning students be required to complete the current GER. While this presents some challenges for academic programs, it would provide an opportunity for the new GEP to “ramp up” and for CUE to populate the new lists with appropriate courses and to examine courses on the existing lists that were grandfathered on the lists in 2003 when the current category objectives were developed. Furthermore, the retention of most of the current lists and category objectives in the proposed GEP should make the transition period much smoother than might otherwise be the case. Refer to Appendix H for a more detailed timeline.

Existing Categories

For the categories that will be carried over from the current GER to the proposed GEP (Mathematics, Natural Science, Humanities – General, Social Science, and PE), the TF recommends that the Rationale and Objectives remain as currently written. Furthermore, the TF recommends that the courses currently on those lists be retained under the proposed GEP with the concurrence of the colleges offering the courses. However, the TF recommends that all courses on these lists that were added before 2003 and thus were added before the current Objectives were put in place be reviewed using the criteria now in use by CUE for adding courses to the lists. The TF recommends that CUE develop a timeline for accomplishing this review, with the proviso that this review be complete no later than the end of the fall 2011 semester. Finally, the TF recommends that CUE, in collaboration with appropriate faculty members, re-examine the rationale and objectives for each category.

New Categories

The Additional Breadth category requires the development of an Engineering list. The TF recommends that CUE collaborate with representatives from the College of Engineering to develop category objectives and to populate this list. While this is an important element it is not immediately critical to the success of the GEP, as students whose majors are primarily focused on Humanities or Social Sciences may choose courses from the existing Mathematics or Natural Sciences list and should have ample opportunities to fulfill this requirement even as the Engineering list is developing.

The U.S. Diversity and Global Knowledge categories are also new and must be developed. While the TF has developed proposed rationale and objectives for these categories and identified courses that might meet those objectives (see Appendix I), the TF recommends that DUAP appoint two committees to complete the development of the objectives and to identify a small number of existing courses for the lists. These committees should work collaboratively with CUE and should include members from appropriate departments, such as the Associate Provost for Diversity and African-American Affairs and the Associate Provost for International Affairs (or their designees),

and members of CUE and the GERTF. It is important that this work be completed quickly so that entering freshmen in 2009 and beyond will have lists of courses from which to choose. Because these are co-requisites rather than stand-alone requirements, it would be helpful to identify courses that meet the objectives but are already on existing category lists.

Interdisciplinary Perspectives is the final new category in the proposed GEP. Arguably, this will be the most difficult category list to develop. The TF has developed a rationale and objectives for this category, and tentatively identified STS courses that will meet the objectives. However, the TF recommends that DUAP appoint a committee to oversee this category in collaboration with CUE. In order to populate this list before implementation of the proposed GEP, the TF recommends that existing STS courses (currently 138 courses) be migrated to the IP lists with the concurrence of the colleges offering such courses, with the understanding that within three years the migrated courses must be approved by CUE using the same criteria that will be applied to courses added to the list after the initial migration. One of the crucial goals for the committee will be to encourage the development of such courses and to ensure university support for the continuing development of this category and the corresponding course list.

Required Curriculum Revisions

One of the results of the new GEP will be that all of the current curricula will have to be revised to reflect the new general education requirements. The magnitude of the changes will vary from program to program. Some programs may decide to rearrange the courses in their curricula to accommodate the new GEP, while other programs may decide to take advantage of this opportunity to rethink and revise the required major courses.

Appendix J is an example of a curriculum that has been changed to reflect the new GEP. The appendix shows the current Format B for the B.S. in Mathematics and a proposed version of the same degree that includes the new GEP requirements. Note that in this example the total number of credit hours for the degree is not changed and both curricula include 14 hours of free electives.

Optional Thematic Tracks

The TF has identified several potential thematic tracks. However, in order to ensure continued vitality for this element, the TF recommends that DUAP appoint a committee to further refine the ideas here, to enlist faculty members from across the university to develop thematic tracks, and to suggest policies and procedures to guide the future development of this portion of the General Education Program. This committee would work in collaboration with CUE.

Other Elements

The TF identified a number of programs and opportunities that appear to be advantageous for students. In seeking to find an appropriate balance between university requirements for general education and flexibility for undergraduate programs, the TF elected not to require these programs for all

students. However, the TF recommends that all students be encouraged to take First Year Inquiry courses, to participate in Study Abroad programs, to participate in service learning experiences, to participate in research opportunities, and to engage in creative processes that are shared with an audience.

Transfer Students

The Task Force recommends the following with respect to transfer students and the GEP.

i. Internal Transfers

A. Students who have been admitted into the university prior to the fall semester of 2009 will satisfy the general education requirements in effect when they were admitted into the university (the GER).

B. Students who are admitted into the university during or subsequent to the fall semester of 2009 will fulfill the requirements of the new GEP. Students in this category who change their major, including moving from FYC or TP into a degree program, will not be required to revise their GEP plan. They may be required to complete additional courses to meet the requirements of the major. As an example, a student who has completed the mathematics requirements of the GEP and then transfers from a humanities program to a physical or biological sciences program may be required to take additional mathematics courses for the new major notwithstanding their completion of the GEP requirements.

ii. Transfers from the North Carolina Community College System (NCCCS)

A. Students who transfer from an NCCCS unit, and who have earned an Associates of Science or Associates of Art degree, will have completed NC State's GEP in accordance with the Comprehensive Articulation Agreement (CAA). Again, depending upon the major into which they transfer, these students may be required to take additional courses notwithstanding their completion of the GEP. As an example, students who transfer into science or engineering majors may be required to take additional mathematics and natural science courses despite their satisfaction of the GEP.

B. Students who transfer from an NCCCS unit, but who have not completed an Associates degree or who have completed an Associates degree other than an AA or AS degree, are not covered by the CAA and are subject to the general education requirements in effect at the time they enter NC State. Their course work will be evaluated on an individual course equivalency basis and in most cases they will be required to complete additional courses to satisfy the GER (for those who enter NC State before the fall semester of 2009) or the GEP (for those who enter NC State during or subsequent to the fall semester of 2009).

iii. Transfers from all other institutions

A. Students who transfer from other institutions (excluding units of the NCCCS as described above) that are not subject to a programmatic bilateral articulation agreement must complete the general education requirements in effect when they enter NC State. Such students entering prior to the fall semester of 2009 will complete the GER, while such students entering during or subsequent to the fall semester of 2009 will complete the GEP.

B. Students who transfer from other institutions (excluding units of the NCCCS as described above) who are subject to a programmatic bilateral articulation agreement should consult their NC State adviser for detailed information. Each bilateral articulation agreement is different and general statements are apt to be misleading.

V. Assessment

Overview

The purpose of general education assessment is to provide information about student achievement of the learning objectives of the GEP so that faculty members and the Council on Undergraduate Education can make appropriate enhancements to improve student learning. This is critical to ensure that every NC State graduate is prepared for the changing demands of professional careers and a lifetime of learning, and has a foundation for involvement in their communities as responsible citizens and leaders. Assessment can also provide information that is useful for others at NC State and for external constituencies.

Since 2003, the assessment of general education at NC State has been course-based. Operationally, this means that every faculty member teaching a course approved by CUE for the general education lists is in theory required to assess the student learning outcomes for their course that support the GER category objectives and report on their findings and course enhancements. This has never been widely practiced because of the general perception that while this approach provides information that is useful for individual instructors to improve their own courses or sections, the information is not useful for improving the general education requirements as a whole.

Therefore, one of the goals of the General Education Review Task Force (GERTF) is to recommend a new approach for general education assessment that is both meaningful and manageable. The approach, in other words, should provide information that can illuminate student achievement of the general education learning objectives and do so without unduly burdening the faculty. Five distinct approaches were discussed by the GERTF (they are outlined in some detail in Appendix K):

- Continue the current model
- Sample courses to be assessed
- Move assessment of general education to the undergraduate program assessment process
- Standardized testing
- Portfolio approach

However, a comprehensive assessment model will include elements from all five. In other words, there is no single distinct approach that is best; the real choice is how to blend these approaches to best achieve the mission of general education.

The GERTF Recommendation

The GERTF recommends that a “sampling” approach be initiated immediately on a pilot basis. This option would seek student work from selected general education courses and provide stipends for a small group of trained faculty to evaluate that student work and draw conclusions about student

achievement of the general education objectives. However, other approaches should be utilized where appropriate, and to that end the Office of Assessment in DUAP will begin to explore the usefulness of the information related to student achievement in general education that is provided by institutional survey results, academic program assessment reports, from the use of portfolios by those academic programs using them and information available from assessment in student life programs. Furthermore, it is thought that the UNC General Administration will soon require that all institutions in the system implement the Collegiate Learning Assessment, and the results from this implementation will be carefully studied for possible use in general education assessment.

The DUAP Assessment Office will implement the “sampling” approach as soon as possible. In addition, DUAP will work with those campus groups that have GEP assessment interests (such as UPA, Student Affairs, etc.) to broaden the process to include N.C. State generated surveys and potential national evaluation instruments such as the CLA. The assessment results will be reported to University Planning and Analysis for monitoring and reporting general education status to SACS.

It should be noted that the GERTF envisions assessment as a developing process, and means and methods for evaluating student achievement of the general education objectives not noted in this report will be tested as and when appropriate. This is a complex and evolving process.

VI. Resources

Because the proposed General Education Program is broadly similar to the existing GER, it is anticipated that implementation will not require significant additional resources. There are some new elements, however, that must be supported with meaningful resources if they are to develop and remain vibrant in the long term. The most critical need is for support of the development of Interdisciplinary Perspectives courses, as these will be largely new courses yet to be developed (although it has been noted in this report that a large number of Science, Technology and Society courses will meet the requirements to be listed in this category). This support will provide faculty members with the time needed to develop these courses, and should take the form of budget resources in addition to encouragement from deans and department heads for faculty members who choose to participate and training from university offices for faculty who may be unfamiliar with an interdisciplinary approach to undergraduate education.

The TF has identified existing courses that could potentially satisfy the “U.S. Diversity” and “Global Knowledge” categories, but it is clear that other courses will have to be identified and/or developed. While these categories are new, the concepts are familiar to many faculty members and meeting the requirements might involve only relatively minor changes in existing courses. Thus, university support is not as critical for these courses as it is for the Interdisciplinary Perspectives courses.

The specific resource requests are as follows:

- 2008 - \$100,000 to be used as grant money for the development of new courses (particularly in the IP category but other courses as well) and \$25,000 for assessment.
- 2009 - \$125,000 for the continuation of new course development and for assessment activities
- 2010 and beyond - \$25,000 per year for assessment (permanent) and \$100,000 per year permanently redirected to the colleges for continuing support of GE courses

The thematic tracks are also new, but depending upon the specific recommendations of the task force charged with developing this element, there would almost certainly be less need for significant university resources and support. The danger here is that because the thematic tracks are entirely optional, they may be overlooked somewhat during implementation and never grow to become the dynamic feature of the GEP that the TF envisions. Thus the TF recommends that faculty members be encouraged to take an active role in developing and promoting thematic tracks.

Finally, the TF has recommended that students be encouraged to participate in several opportunities without requiring them as part of the proposed GEP. However, it is clear that there are not enough opportunities for all undergraduates at NC State to take an FYI course, to study abroad, to participate in an undergraduate research experience, to participate in an experiential

learning program, or to participate in sustained creative activities that are shared with an audience. Therefore, the TF recommends that the university provide resources sufficient for every undergraduate to have the opportunity to participate in at least one of these experiences at least once during their time at NC State.

VII. Conclusion

This proposal is intended to preserve what is strongest about our current GER requirements--i.e. the strong emphasis on a diversity of disciplinary knowledge--while at the same time adding new elements, such as the interdisciplinary requirements, the thematic option and the diversity and global co-requisites, which will give greater coherency to the new GEP system. It is the intention of the GERTF that the new GEP will enable students to develop a greater understanding of the importance of other disciplines for their major fields. The focus therefore on the new GEP is interconnectedness and interrelatedness, as a means of enabling students to deal with an increasingly interdisciplinary, and global, approach to societal problems.

The GERTF also envisions the new GEP as a “living curriculum”, one that changes and grows as we assess its impact on our students. It is designed to be flexible for both students and academic programs while still enhancing students’ intellectual engagement in their majors, preparing them for the changing demands of professional careers, equipping them for a lifetime of learning, and laying a foundation for our graduates’ involvement in their communities as responsible citizens and leaders.

Implementation of the new GEP will also present the opportunity to all of the colleges and academic programs to evaluate their degree programs. This evaluation may include the development of new courses for the GEP and/or the majors, the elimination or revision of existing courses, the offering of free electives in the individual curriculum, changes in the total number of credit hours required for graduation (within the range of 120-128 credit hours) for each degree program, and the possible development of college required courses.

Appendix A

General Education Requirements (GER) Review Task Force Charge

The Provost has charged Undergraduate Affairs (UAP) with conducting a complete review of NC State University's General Education Requirements (GER). Since the implementation of the GER in 1994, the Program has been subject to several partial reviews, particularly in regard to assessment of the GER and process issues, by the Council on Undergraduate Education (CUE) and the University Courses and Curricula Committee (UCCC). However, the entire GER, including purpose, structure, function, and assessment, has not been reviewed in a comprehensive manner.

In recent years CUE has modified the GER in a number of ways: redefined the GER objectives, changed the number of required credits (replaced the 6-credit ENG 111/112 with the 4-credit ENG 101), rearranged categories within the GER, and developed an ongoing course-based assessment process for the GER Program. While there have been documented justifications and oversight for each of these changes, there has been little review of the impact of these changes overall on the GER or the impact on the various academic programs regarding required changes to reflect the new or modified requirements.

As we move into the 10th year of GER, it is appropriate that we review the program and its benefits to our students and to the campus. The review should include the following major directives:

1. Describe the impact that the GER will have on an NC State student.
2. Report on GERs at our peer institutions and at other institutions in the UNC system;
3. Recommendation of a GER model (or ranked multiple GER models) for NC State based on these comparisons, best practices, and our institutional mission. The recommended models should
 - identify categories to be included in the GER, such as course- or program-based values (e.g., diversity, service learning, international relations, etc.);
 - provide the total number and distribution of credit hours assigned to the GER including course based and/or program based requirements or initiatives; and
 - identify applicable intersections with other NC State initiatives such as LITRE;
4. Determine impact of the best model(s) on other elements of an NC State undergraduate degree, including number of hours required for graduation;
5. Provide an analysis of any additional costs or cost savings associated with the recommended model;

6. Provide an assessment plan and process for an ongoing assessment of the GER; and
7. Recommend an implementation plan including a curriculum review on what to keep, delete, and/or add to the current GER that can be in place by Fall 2005.

Drawing largely from the work and responsibilities of CUE, the task force will be chaired by John Ambrose, Vice Provost for Undergraduate Affairs who has administrative oversight to CUE and UCCC. For their expertise with GER, with University procedures, and with various campus initiatives, members of the task force will include faculty representatives from CUE and UCCC; UAP Assessment; CALS, CHASS, and PAMS (the colleges that provide the majority of the GER courses); the University Registrar; two faculty at-large from the Faculty Senate; and the UAP Academic Standard Coordinator.

In conjunction with the creation of this task force, there will be a moratorium on any significant changes to the GER including changes to categories of courses and the distribution of credit hours within the GER so the task force has a stable set of conditions to review and evaluate. This moratorium will also aid in the ongoing assessment process for the GER and will remain in effect until the Fall 2005 semester, when the GER Plan is confirmed.

The Chair of the task force will ensure that the Associate Deans for Academic Affairs are kept informed of the progress of the GER Review.

Appendix B

| GERTF Member Roster | | | |
|----------------------------|---|--|-------------------------------|
| Name | Title | College/Dept./Office | Year: |
| John T. Ambrose, chair | Associate Dean; Professor, Entomology | Undergraduate Academic Programs; Entomology | 2004-05 2005-06 2006-07 |
| Sarah Ash | Food Science, Associate Professor | Food Science, CALS | 2004-05 2005-06 2006-07 |
| Subhash K. Batra | Professor, TATM | Faculty Senate, College of Textiles | 2004-05 |
| Michael Carter | Professor, English | CHASS, CUE | 2004-05 2005-06 2006-07 |
| Allen Dupont | Director of Assessment | Undergraduate Academic Programs | 2004-05 2005-06 2006-07 |
| Ken Esbenshade | Associate Dean; Professor, Animal Science | CALS | 2004-05 2005-06 2006-07 |
| Chris Gould | Professor and Head of Physics | College of Physical and Math Sciences | 2004-05 |
| Joni Spurlin | University Director of Assessment | University Planning and Assessment | 2004-05 2005-06 2006-07 |
| Louis D. Hunt | University Registrar | Registration & Records | 2004-05 2005-06 2006-07 |
| March L. Krotee | Head, Physical Education | Faculty Senate | 2004-05 2005-06 2006-07 |
| Jacqui Hawkins- Morton | First Year College Assistant Director for Advising & Training | First Year College, CUE | 2004-05 2005-06 2006-07 |
| Jose A. Picart | Vice Provost | Diversity and African American Affairs | 2004-05 2005-06 2006-07 |
| Dan Robison | Assoc. Prof./Dir. Hardwood Research | College of Natural Resources | 2004-05 2005-06 2006-07 |
| Laura Severin | Associate Dean of Academic Affairs and Interdisciplinary Programs; Professor, English | College of Humanities & Social Sciences | 2004-05 2005-06 2006-07 |
| Jerome Lavelle | Assistant Dean of Academic Affairs | College of Engineering | 2004-05 2005-06 2006-07 |
| Kathy Wallace | Academic Standards Coordinator | Undergraduate Academic Programs | 2004-05 2005-06 |

| | | | |
|-------------------------|---|-------------------------------------|--------------------|
| Catherine Freeman | Academic Standards Coordinator | Undergraduate Academic Programs | 2006-07 |
| Jo-Ann Cohen | Associate Dean, Academic Affairs; Professor, Mathematics | College of Physical & Math Sciences | 2005-06 2006-07 |
| Marian McCord | Associate Professor; Textile Engineering, Chemistry & Science | College of Textiles | 2005-06 2006-07 |
| Karen Helm | University Planning Office Director | University Planning and Analysis | 2005-06 |
| Samara Fleming Burnette | Coordinator for Retention Studies | Undergraduate Academic Programs | 2005-06 2006-07 |
| | | | |
| Students: | | | |
| Andrew Barnes | Student Representative | Student Senate | |
| Christopher Kessler | Student Representative | Student Senate | |
| Jordan Wallace | Student Representative | Student Senate | |

Appendix C
NC State University
Undergraduate General Education Requirements
October 2004

GER Mission Statement:

Rationale: The program in General Education established the foundation for a lifetime of intellectual discovery, personal development, and community service while preparing students for advanced work in various academic and professional disciplines.

Objectives:

The General Education program will:

1. Provide instruction that enables students to master basic concepts of a broad array of the intellectual disciplines,
2. Help students develop versatility of mind, an ability to examine problems individually and collaboratively from multiple perspectives, including ethical and aesthetic perspectives,
3. Provide students the guidance and skills necessary to become intellectually disciplined, to be able to construct arguments that are clear, precise, accurate, and of relevant depth and breadth,
4. Encourage students to take personal responsibility for their education, including the ability to find, evaluate and communicate new information, setting the stage for life-long learning.

General Education Requirements

| Category | Hours Required |
|--|---------------------------------------|
| Mathematical and Natural Sciences | 20 hours |
| Science, Technology & Society | 3 hours |
| Humanities and Social Sciences | 21 hours |
| Writing, Speaking and Information Literacy | 7 hours + integral curriculum content |
| Physical Education | 2 hours |
| Computer Literacy | 0 hours (integral curriculum content) |
| Foreign Language | 0 hours* |
| <u>Free Electives (not required)</u> | <u>0 hours</u> |
| | <u>53 hours**</u> |

* FL_ 102 level proficiency required; students will get free elective credit if FL 102 is taken

** Reduce by 3 if STS double-counted

Mathematical and Natural Sciences

Requirement in Mathematical and Natural Sciences (20 hours):

- Two courses (6 hours) selected from mathematics, statistics, and logic; one must be a mathematics course.
- Three courses (11 hours) from the natural sciences; two from different basic sciences (biology, chemistry, earth sciences and physics); *two of the three courses must have a laboratory.*
- The sixth course (3 hours) must be selected from any of the mathematical science; natural science; or science, technology and society courses.

Mathematical Sciences

Rationale: A logical approach to problem solving is important for successful functioning in society. It is also important that students be able to formulate models, be critical consumers of quantitative information, communicate mathematically and solve problems.

Objectives:

Each course in mathematical sciences will provide instruction and guidance that help students to:

1. improve and refine mathematical problem-solving abilities; and
2. develop logical reasoning skills.

Natural Sciences

Rationale: The natural sciences pursue basic questions about the workings of the universe, and the richness, variety and interconnectedness of the world around us. Students today are exposed to an increasing volume of information, from a large variety of sources, in diverse and changing formats. Training in the natural sciences is essential to help students develop skills to distinguish between testable and un-testable ideas, recognize scientifically valid tests of theories, and understand how information relates to those tests. By studying the natural sciences, students learn to reason both inductively and deductively, develop and test scientific hypotheses, and understand the value and limitations of scientific studies. The development and application of new technologies require scientifically literate citizens who can understand technological issues and evaluate the role of science in society's debate of those issues.

Objectives:

Each course in the natural sciences will provide instruction and guidance that help the student to:

1. use the methods and processes of science in testing hypotheses, solving problems and making decisions; and
2. articulate, make inferences from, and apply to problem solving, scientific concepts, principles, laws, and theories.

Science, Technology & Society

Requirement in Science, Technology & Society (3 hours):

- Courses which satisfy this requirement can be oriented toward science and technology or toward the humanities and social sciences.
 - Students in science and technology curricula should study this topic from a humanities and social sciences perspective.
 - Students with majors in the humanities and social sciences curricula should study this topic from a science and technology perspective.
- This course can also partially satisfy either the humanities and social sciences requirement or the mathematical and natural sciences requirement, but not both.
- This requirement can be satisfied by an interdisciplinary course designed to cover both perspectives.

Rationale: North Carolina State University, as a land grant university, has a mission that stresses the application of science and technology for the betterment of humankind. It is essential, therefore, that students be exposed to the vital interactions among science, technology, society, and the quality of life.

Courses fulfilling the Science, Technology & Society requirement should have as a central instructional focus the following objectives. To provide sustained, rigorous, and substantive instruction, efforts to meet the GER Science, Technology & Society objectives should be evident across the entire syllabus and be reflected in course lectures, discussion, readings, projects, assignments, etc.

Objectives:

Each course in the Science, Technology & Society category of the GER will provide instruction and guidance that help students to:

1. develop an understanding of the mutual relationships between science or technology and societies, including the effects of or the effects on cultures, values, industries, governments, or other facets of those societies; and
2. develop an ability to critically evaluate information regarding these mutual relationships, recognizing that the information may come from a variety of sources and perspectives.

Humanities and Social Sciences

Requirement in Humanities and Social Sciences (21 hours):

- One course in the study of literature (3 hours).
- One course in the study of history, philosophy, or religion, (3 hours).
- One course in the study of visual and performing arts. Alternatively, this requirement may be fulfilled by a course in the study of history. (3 hours)
- Two courses from different content areas, in the study of psychology, economics, politics and government, sociology, anthropology and cultural geography. (6 hours).
- Two additional courses selected within Humanities and Social Sciences (6 hours). These hours could be used to pursue specific interests, to provide additional breadth or develop depth by taking courses focused on a common theme.
- Among the courses selected to fulfill the Humanities and Social Sciences requirement *at least one must focus on a non-English speaking culture.*

Humanities and Social Sciences (General)

Rationale: The humanities and the social sciences comprise the subjects and disciplines that use various modes of rational inquiry to understand human nature and experience, organization and change in human societies, the nature of the world, and rational inquiry itself. An education in the humanities and social sciences requires reading significant works, gaining an exposure to a variety of methodologies, and learning to apply these in written exposition. An education in the basic humanistic disciplines is a necessary part of being truly educated -- of becoming a citizen with a broad knowledge of human cultures and with well-considered moral, philosophical, aesthetic, and intellectual convictions.

Objectives:

Each course in the general humanities category of the General Education Requirements will provide instruction and guidance that help students to:

1. understand and engage in the human experience through the interpretation of human culture and artifacts (this objective must be the central focus of each humanities course); and
2. become aware of the act of interpretation itself as a critical form of knowing in the humanities; and
3. make academic arguments about the human experience using reasons and evidence for supporting those reasons that are appropriate to the humanities.

In addition, each course appearing on one of the specific humanities lists meets the objectives for the specific category as detailed below:

Humanities - Literature

Rationale: The study of literature introduces students to the many ways of deriving meaning from the human condition and to the many forms in which meaning is expressed. Studying literature also develops students' capacity for critical analysis and personal expression, their aesthetic sensitivity, and their reading and writing skills.

Objectives:

Each course within the literature requirement of the General Education Requirements in the Humanities will provide instruction and guidance that help students to:

1. understand and engage in the human experience through the interpretation of literature (this objective must be the central focus of each literature course); and
2. become aware of the act of interpretation itself as a critical form of knowing in the study of literature; and
3. make scholarly arguments about literature using reasons and ways of supporting those reasons that are appropriate to the field of study.

Humanities - History

Rationale: The study of history provides an understanding of continuities and changes in human thought and behavior and of the ongoing process in which individuals shape and are shaped by their societies and their governments. Studying history also provides training in the analysis of process and the evaluation of a wide variety of evidence.

Objectives:

Each course in the history category of the General Education Requirements will provide instruction and guidance that help students to:

1. understand and engage in the human experience through the interpretation of evidence from the past situated in geotemporal context (this objective must be the central focus of each history course); and
2. become aware of the act of historical interpretation itself, through which historians use varieties of evidence to offer perspectives on the meaning of the past; and
3. make academic arguments about history using reasons and evidence for supporting those reasons that are appropriate to the field of study.

Humanities - Philosophy

Rationale: In the study of philosophy, students are exposed to the rigorous procedures of philosophical thought, to ethical issues, and to the insights of ethical reasoning.

Objectives:

Each course in the philosophy category of the General Education Requirements will provide instruction and guidance that help students to:

1. understand and engage in the human experience through the philosophical study of human thought, human values, and the world (this objective must be the central focus of each philosophy course); and
2. become aware of the acts of understanding and engagement itself as critical parts of the study of philosophy; and
3. make philosophical arguments using reasons and ways of supporting those reasons that are appropriate to the field of study.

Humanities - Religion

Rationale: In the study of religions, students are introduced to beliefs of their own and other cultures and they learn how various religions have resolved ethical issues and have addressed the human condition.

Objectives:

Each course in the religion category of the General Education Requirements will provide instruction and guidance that help students to:

1. understand and engage in the human experience through the interpretation of religious cultures and artifacts (this objective must be the central focus of each religion course); and
2. become aware of the act of interpretation itself as a critical form of knowing in the study of religion; and
3. make arguments about religion using reasons and ways of supporting those reasons that are appropriate to the field of study.

Humanities - Visual and Performing Arts

Rationale: The visual and performing arts develop students' aesthetic sensitivities, critical judgment, and personal creativity. They also provide students with an understanding of the cultural and historical dimensions of artistic expression.

Objectives:

Each course in the visual and performing arts category of the General Education Requirements will provide instruction and guidance that help students to:

1. deepen their understanding of aesthetic, cultural, and historical dimensions of artistic traditions; and
2. strengthen their ability to interpret and make critical judgments about the arts through the analysis of structure, form, and style of specific works; and
3. strengthen their ability to create, recreate, or evaluate art based upon techniques and standards appropriate to the genre.

Social Sciences

Rationale: The study of psychology, economics, politics and government, sociology, anthropology or cultural geography enables students to understand individual and collective human behavior by exploring meaning within a variety of social, cultural and political contexts; by analyzing the structures within which human goals are established and human choices are made; and by applying theoretical and quantitative models to specific cases.

Objectives: Each course in the social science category of the General Education Requirements will provide instruction and guidance that help students to:

1. understand at least one of the following: human behavior, mental processes, organizational processes, or institutional processes; and
2. understand how social scientific methods may be applied to the study of human behavior, mental processes, organizational processes, or institutional processes; and

3. use theories or concepts of the social sciences to understand real-world problems, including the underlying origins of such problems.

Writing, Speaking and Information Literacy

Requirement in Writing, Speaking and Information Literacy (7 hours):

- One semester of composition and rhetoric during the freshman year.
- One semester from any of the following:
 - a. advanced writing,
 - b. speech, or
 - c. foreign language (FL_ 201 or higher in the student's first foreign language or any FL_ course in a second language).
- In addition, each curriculum is designed so that upper-level courses and other programmatic experiences help students write and speak competently in the discipline, including the ability to retrieve, evaluate, and manage information in ways that are appropriate to the discipline. In each curriculum, the design and delivery of that support are guided by various forms of programmatic assessment.

Rationale: Writing and speaking are powerful ways of understanding ourselves and the world in which we live. It is through writing and speaking that the various disciplines and professions define the knowledge and methodologies that characterize them. And because effective writing and speaking in academic and professional settings often demand proficiency in the use of information technologies and resources, students must have a basic understanding of how information is identified and defined by experts, structured, organized, and accessed, in both the print and digital environments. Mastery of communication arts and information skills is central to engaging in the productive life of academic and professional communities.

Objectives:

Each course in the writing and speaking category of the General Education Requirements will provide instruction and guidance that help students to:

1. communicate effectively in specific writing or speaking situations, which may include various academic, professional, or civic situations; and
2. understand and respond appropriately to the critical elements that shape communication situations, such as audience, purpose, and genre; and
3. critique their own writing or speaking and provide effective and useful feedback to enable other students to improve their writing or speaking; and
4. demonstrate critical and evaluative thinking skills in locating, analyzing, synthesizing, and using information in writing or speaking activities.

Physical Education

Requirement in Physical Education (2 hours):

- Two PE courses, one of which must be a Fitness and Wellness course (*Fitness and Wellness courses are those found in the PE 100-level series*).
- All courses will be available on an S/U basis.

Rationale: The development of attitudes and skills for a healthy life is essential to a university student's education. In addition to developing and gaining an appreciation of health-related fitness and wellness concepts and fundamental motor skills, student participation in physical activities and sport significantly decreases major health risks, reduces stress from the pressures of academic life, and improves general social and mental well-being.

Objectives:

Each course in the Physical Education category of the General Education Requirements will provide instruction and guidance that help students to:

1. learn the fundamentals of health-related fitness, encompassing cardio-respiratory and cardiovascular endurance, muscular strength and endurance, muscular flexibility and body composition; and
2. apply knowledge of the fundamentals of health-related fitness toward developing, maintaining, and sustaining an active and healthy lifestyle; and
3. acquire or enhance the basic motor skills and skill-related competencies, concepts, and strategies of physical activities and sport; and
4. gain a thorough working knowledge, appreciation, and understanding of the spirit and rules, history, safety, and etiquette of physical activities and sport.

Computer Literacy

Requirement in Computer Literacy (0 hours): integral curriculum content

Rationale: Today's graduate must have a knowledge of information technology and computer applications. Every student needs a basic understanding of information processing. It is not necessary that every student be a programmer. Students should develop and demonstrate proficiency in the use of computers, learning to use applications such as word processing, spreadsheets, database management programs, electronic mail, and packages and applications specific to their field of study.

Objectives:

(none - no courses associated with requirement)

Foreign Language

Requirement in Foreign Language:

1. Two years of high school foreign language are required as a prerequisite for admission to the University.
2. Foreign language proficiency at the FL_ 102 level is required for graduation.

Rationale: In a sense, languages are keys to the world. The continuous expansion of international relations makes the knowledge of foreign languages increasingly significant. In learning a foreign language and studying its literature and cultures, students acquire a body of knowledge about how humans think, view the world, express themselves, and communicate with one another. Language learning also expands one's ability to create and discover new meaning in one's own language and culture. Knowledge of the linguistic structures of a second language helps students to understand their own language better. Likewise, an awareness of contrasting cultural concepts sensitizes students to the differences between their own culture and others. Such an awareness has become increasingly important as the communities of the world have become more interconnected and interdependent. The needs of our global society require that more citizens have access to other languages and cultures in order to cooperate in the process of improving the quality of human life.

Objectives:

(none - no courses associated with requirement)

Free Electives

Requirement for Free Electives: none.

Rationale: All programs are encouraged to include free electives in their curricula to satisfy their educational objectives. Moreover, students who would like to take courses beyond those required for their degree are encouraged to do so.

Objectives: (none - no courses associated with requirement)

Appendix D

Brief Synopsis of General Education Programs At NCSU's Peer Institutions

Prepared by Allen Dupont
Office of Assessment
Division of Undergraduate Affairs

This synopsis is based on the descriptions of general education programs, and the assessment thereof, provided on the web sites of the fifteen peer institutions (follow the link to find the rationale for the list: http://www2.acs.ncsu.edu/UPA/peers/current/ncsu_peers/peerlinks_ncsu.htm) and sister institutions in the UNC system. No other information was sought. The various web sites were reviewed between June and September 2004.

In general, each institution's web site was accessed and searched for "general education" or "core curriculum", and then searched for "outcomes assessment" or "academic assessment". The web pages were then evaluated with the following questions in mind:

Is there a mission statement for general education, or a theoretical framework on which to "hang" the various categories?

Is there a set of student learning outcomes?

How is general education delivered? Is it a menu of courses, a core of required courses, or some combination?

Is general education assessed, and if so, how is it assessed? Is the assessment course based, or is it based on skills tests?

The first three sets of questions are loosely based on a typology of general education outlined in Robert R. Newton, "Tensions and Models in General Education Planning", *The Journal of General Education*, vol. 49, no. 3, 2000. The last set of questions is driven, of course, by an interest in the methods that other institutions use to assess student learning in general education courses (or the core curriculum).

As an example, and to set the stage for the remainder of the analysis, this synopsis begins with an objective evaluation of the NCSU web site with respect to the given questions.

North Carolina State University:

There is a clear mission statement for General Education at North Carolina State University. The General Education Requirements (GER's) are divided into categories that follow a typical pattern (written communication, quantitative reasoning, humanities, etc), although there is no clear explication of

how the categories are related to the mission statement. There are student learning outcomes associated with each category.

General education is delivered through a list of approved courses for each category. To get a course approved, the faculty member offering the course (or the course coordinator for multiple section courses) must provide specific student learning outcomes for the course that are directly related to the category outcomes. The faculty member or course coordinator must also provide a fairly detailed assessment plan, including an indication of the methods to be used to assess student learning and a description of who will carry out the assessment and a timeline for the assessment. Periodically, reports must be submitted to a faculty committee (CUE) charged with overseeing the general education program. The report (“Guided Reflection”) should specifically report on the assessment results and how those results will be used to make changes for improvement.

This is a relatively new system at NCSU, and not all general education courses have been “upgraded” to the new system.

Carnegie Mellon University:

CMU’s general education program is very decentralized, with each college setting its own core curriculum. There do not appear to be any university wide requirements, nor is there any apparent theoretical framework or justification. Some colleges provide a set of goals for their program, while others do not. In all colleges, the general education program is course delivered; students choose from a menu of courses that is different for each college.

From a perusal of the web site, it is apparent that outcomes assessment is in its infancy at CMU. There are some workshops on assessing student learning but no information about who might attend these workshops or whether or not they are in any sense required. What little information is available indicates that most of the assessment efforts revolve around various surveys that are administered to students on an irregular schedule.

Case Western Reserve University:

CWRU has recently adopted a program called SAGES (Seminar Approach to General Education and Scholarship). Students are required to take four seminars: a First Year (freshman) seminar, two University Seminars, and a Discipline (Major) Seminar. There is a description on the web site that provides a justification for this approach, but there are no explicit expectations about what students will gain from this program. However, students’ writing abilities are mentioned prominently throughout the description and justification, leaving the impression that writing is to be emphasized in the seminars. There is no information regarding specific student learning outcomes for the individual seminars.

The assessment activity seems to be survey driven. There is a report on the web site that outlines changes planned for the program based on the survey results. The planned changes include expanding the number of topics offered in the First Year Seminar (currently all First Year Seminars have the same topic,

“The Life of the Mind”) and providing more flexibility for seminar instructors to individualize their seminars. There is a reference to a requirement for students to maintain an electronic portfolio of their written work for the various seminars, but there is no indication of what will be done with these portfolios or how they might be used for program improvement.

Duke University:

Duke’s general education program is centered around five “Areas of Knowledge” (Arts, Literature and Performance; Civilizations; Natural Sciences; Social Sciences; and Quantitative Studies, all of 2 courses) and six “Modes of Inquiry” (Cross Cultural Inquiry, 2 courses; Ethical Inquiry, 2 courses; Science, Technology and Society, 2 courses; Foreign Language, proficiency; Research, 2 courses; and Writing, 3 courses, 2 of which must be writing intensive courses in the discipline). Duke allows for cross listing; apparently, this means that a single course can satisfy both an Area of Knowledge requirement and a Modes of Inquiry requirement. Although not specifically identified as part of the general education curriculum, Duke also requires students to take at least one seminar course during their freshman year.

The Trinity College of Arts and Sciences catalog provides a very general description of what students can expect to get out of the general education program, but there does not appear to be a set of explicit student learning outcomes. There does not appear to be an explicit theoretical framework underlying either the areas of knowledge or the modes of inquiry. There are no documents on the web site describing the process by which a course can be included on the list of general education courses, nor how or why a course is designated as a writing intensive course.

Assessment of student learning outcomes at Duke seems to be lacking. Most of the assessment material on the web site comes from the Center for Instructional Technology and consists of articles describing how to go about the process (including, prominently featured, an article by our own Marilee Bresciani). There is a proposal for a more structured assessment of student writing, but no indication that the proposal is being implemented. Finally, the 1998 Self Study for SACS Reaffirmation of Accreditation is available on the web site; it states rather straightforwardly that no assessment was taking place at the time that it was written. There is no indication that any formal assessment is currently taking place.

Georgia Institute of Technology:

GT has a general education program that is characterized by objective categories (similar to NCSU). The categories are: Mathematics; Communication; Computer Literacy; Science; Scientific Culture and Values; Global Awareness, Human Values and Culture; Individual and Society; Group Involvement; and Health and Wellness. Each objective category has clear, measurable student learning outcomes expressed in the form of “students will be able to . . .”

However, GT, as a unit of the University System of Georgia, must conform to the state core curriculum required of all students. Unfortunately, the system

office has not provided a theoretical framework or justification for the core curriculum imposed on the constituent units, nor has it provided any goals or learning outcomes to be achieved by the core curriculum. Thus, GT is in the unenviable position of setting out program objectives and learning outcomes for a program over which it exercises little direct control.

The core curriculum is organized as follows:

Area A: Essential Skills (9 hours – 6 hours English + Calculus I)

Area B: Institutional Options (4 hours – program approved elective plus the “4th hour” of Calculus I from “Essential Skills”)

Area C: Humanities (6 hours)

Area D: Science, Math & Technology (12 hours – 8 hours science + Calculus II)

Area E: Social Sciences (12 hours)

According to the GT web site, a general education assessment plan has been developed and will be finalized this summer, with presentation to the entire faculty for approval in the fall. There were no details concerning the plan or its elements on the web site.

Iowa State University:

ISU does not have a university wide general education program; instead, each college sets its own general education requirements. However, ISU requires each college to “address” four areas: Communication/Library; Natural Science/Math; Humanities/Social Science; and “Additional General Education”. There is no indication of common objectives or outcomes across the colleges.

Each college is responsible for its own assessment activities, with no apparent oversight at the university level. The assessment activities appear to be exclusively survey oriented.

Pennsylvania State University:

PSU has a university wide general education curriculum, consisting of the Skills Area, including Writing/Speaking (9 credits) and Quantification (6 credits), and the Knowledge Domains, including Arts (6 credits), Health and Physical Activity (3 credits), Humanities (6 credits), Natural Sciences (9 credits), and Social and Behavioral Sciences (6 credits). Each student must complete 45 credits of general education courses; thus it appears that double- or triple-counting is not allowed. In addition, students may not use courses from their major to fulfill general education requirements. However, there is some flexibility in fulfilling the requirements (a student may take 9 credits in the Arts and only 3 credits in the Humanities, for instance).

In addition, students are required to complete a First Year Seminar course and to earn 3 credits of Intercultural and International Competence and 3 credits of Writing Across the Curriculum. However, courses can be double-counted for these requirements with requirements in the Knowledge Domains.

While the PSU general education program does seem well organized, there are no student learning outcomes or other objectives for the program listed on the web site. There is a statement explaining why general education is

important that indicates some expected benefits, but they do not appear to be specific enough to be measured.

The PSU web site does not give any indication of systematic assessment activity beyond the ubiquitous surveys.

Purdue University:

At Purdue, each college sets its own general education requirements. The only apparent university policy is that the general education program must comprise at least 18 semester hours of course work. For students in engineering or science fields, the general education requirements consist of coursework exclusively in humanities and social science.

The Purdue web site contains no information about any assessment of student learning outcomes.

Rutgers University:

At RU, each college sets its own general education requirements. It is important to note that the colleges are not necessarily discipline related; there are four liberal arts colleges that are apparently residential colleges for undergraduates somewhat analogous to the college system at Rice University or UC-San Diego. There does not appear to be any university requirements or restrictions on the colleges with regard to their general education programs. All of the colleges have unique mission statements, but they do not all have mission statements, objectives, or student learning outcomes for their general education programs.

While the RU web site does contain information pertaining to university wide surveys, there is no mention of assessment of student learning.

Texas A&M University:

TAMU has organized its core curriculum into the following categories: Communication (6 hours); Citizenship (12 hours); Mathematics (6 hours); Science (8 hours); Social Science (6 hours); Humanities (3 hours); Visual and Performing Arts (3 hours); and Kinesiology (4 hours). However, there are no listed objectives or student learning outcomes associated with the core curriculum. On the other hand, it is apparent that for a course to be approved for addition to the core curriculum list it must be reviewed by a group of faculty and then approved by the Faculty Senate. While there is no explicit mention of criteria for approval, documents on the web site strongly suggest that there are such criteria. This implies that there are, at a minimum, objectives for each of the categories despite the fact that no such objectives could be found. The online bulletin (catalog) merely states that the core curriculum “provides breadth” and that courses should be selected from the approved lists in each category in order to “enhance degree goals”.

There is an assessment web site at TAMU, although there is no mention of the specific issue of assessment of student learning taking place in the core curriculum. The focus seems to be on program review. The link to the

Assessment Manual was broken and the Assessment Manual could not otherwise be found online.

University of California – Davis:

UCD has a mission statement for its general education program, although there are no explicit student learning outcomes. The requirements are divided into three broad categories:

Writing: 3 writing intensive courses (from an approved list)

Topical Breadth: 3 courses from each topical area outside of the major (every major is assigned to a topical area). The topical areas are Science and Engineering; Social Sciences; and Arts and Humanities.

Socio-cultural Diversity: 1 course.

Before any writing intensive course can be counted as fulfilling the general education requirement, a student must complete the “Subject A” requirement. This is essentially English Composition proficiency, and can be completed through a minimum score on one of various standardized tests (SAT II, AP, etc.) or through successful completion of English 57.

Transfer students may exempt the general education requirements if they have completed the “Intersegmental General Education Transfer Curriculum” (IGETC), the “Transfer Core Curriculum” (TCC), or completed the general education requirements at another University of California institution under the “UC Reciprocity” protocol.

Students may double- and triple-count courses in the general education program, leading to criticism by WASC that students could complete their general education requirements in “far less” than 45 semester hours. It was noted that it is theoretically possible for a student to satisfy the general education requirements by taking only 3 courses beyond what is required for the major.

The assessment program at UCD is survey driven. The UCD Self Study Report (2002) states that there is “little systematic, campus wide effort to directly measure” student learning outcomes. The only exception is in the engineering programs, and that is a result of ABET accreditation standards.

University of California – San Diego:

Each residential college at UCSD sets its own general education requirements according to the mission of the college. There does not appear to be a university wide framework or standardization. However, UCSD does allow transfers to exempt the general education requirements if they have completed the IGETC (see the entry for UCD), but not apparently if they have completed the TCC. The UCSD catalog does not mention the UC Reciprocity protocol. Two of the colleges require transfers who have completed the IGETC to nevertheless take further general education coursework.

Assessment activity seems to consist of various surveys, with the exception of the University Library. The library is involved in a proposal for setting student learning outcomes in information literacy, and developing a test of student achievement in that area. The engineering programs are also carrying

out some assessment of student learning as a result of ABET accreditation requirements.

University of Georgia:

UGA faces the same dilemma as Georgia Tech – a list of general education requirements imposed from above without explicit student outcomes or broader objectives. In a 2000 speech to participants at a symposium on general education, James Fletcher, Associate VPAA at UGA, opined that the “picture of general education that emerges is one of accretion . . . with no central purpose or theme.”

The general education program at UGA consists of the following dimensions:

Essential Skills (English and math) – ENG 1101, ENG 1102 and one mathematics course are required (9 to 10 hours)

Institutional Options (set by the major department) – 4 to 5 hours

Humanities/Fine Arts (6 hours)

Science, Mathematics and Technology – two science courses and one mathematics/technology course (10 to 11 hours)

Social Sciences (12 hours)

UGA has added two other components to these requirements.

Environmental Literacy is a one course requirement; each department maintains a list of approved courses. Cultural Diversity is also a one course requirement, although it can be fulfilled by study abroad.

Assessment of general education at UGA is currently being addressed. In 2003, UGA piloted both the College BASE and the NSSE as methods of assessing general education. However, given the lack of clearly stated student outcomes, it is difficult to see how these pilot projects will provide proper data for program improvement.

University of Illinois:

UI has a typical general education program. There is a statement in the course catalog that explains the benefits to students and lists some very broad goals of the program. The program is divided into the following areas:

Composition I: 3/6 hours

Composition II: 3 hours

Cultural Studies – Non Western/US Minority: 3 hours

Cultural Studies – Western/Comparative: 3 hours

Language: completion of 3rd semester course (college level, other than the student's native language)

Humanities/Arts: 6 hours

Natural Science/Technology: 6 hours

Social/Behavioral Sciences: 6 hours

Quantitative Reasoning: 6 hours

The UI Academic Policy Handbook contains a rather lengthy exposition of the procedures and requirements to have a course approved for the general education list. However, the Handbook does not contain any student learning

objectives, goals, or outcomes; nor is there a requirement that faculty members teaching the courses have explicit student learning outcomes.

Assessment of general education is apparently non-existent at UI. There is a reference to a task force formed in 1995 to “investigate the viability of specific outcome measures or strategies for assessing general education”, but apparently the effort ended without making any substantive changes.

University of Wisconsin – Madison:

UW has a typical general education program consisting of courses in Communication (3 to 6 credits), Quantitative Reasoning (3 to 6 credits), and Breadth and Ethnic Studies (4 to 6 credits in Natural Sciences and 6 credits in Humanities, Literature and Arts). While the university does not allow double-counting, courses in the major may be used to satisfy these requirements. The general education program has a mission statement that includes broad statements of what students may expect to gain from the program, but there are no explicit student learning outcomes or objectives.

Assessment of the general education program is focused on measuring students’ quantitative and verbal skills through the use of skills tests developed in house. The tests are unique to each course and there are no program level learning objectives. The Assessment Plan (approved in May 2003) explicitly states that assessment “is not intended to evaluate individual courses or instructors”.

Virginia Polytechnic Institute and State University:

Virginia Tech’s general education program is probably more like NCSU’s than any other peer institution. There is a mission statement for general education, with a list of student learning objectives. The general education requirements are:

Writing and Discourse: 9 hours
Ideas, Cultural Traditions, and Values: 6 hours
Society and Human Behavior: 6 hours
Scientific Reasoning and Discovery: 8 hours
Quantitative and Symbolic Reasoning: 6 hours
Creativity and Aesthetic Experience: 1 hour
Critical Issues in a Global Context: 3 hours

In order for a course to be approved as a general education course and added to a category list, the instructor must enumerate student learning outcomes that are tied to the goals of the category. In addition, instructors are required to provide an assessment plan, including measures of assessment, and document student learning. According to the timeline found on the VT web site, all general education course instructors were to have carried out assessment activities and submitted reports by 2001.

Other Institutions in the UNC System

University of North Carolina – Chapel Hill

Chapel Hill has a well thought out rationale for its General Education program. However, no student learning outcomes could be found, either for the program or for individual courses. The program is rather complex, although it requires only 42 hours of coursework. It is divided into three broad categories: Foundations (17 hours), Approaches (25 hours) and Connections (0 hours). Each category contains lists of approved courses although in certain instances particular courses are required.

Foundations consists of Rhetoric A and B (students can “place out” of this requirement), Foreign Language (7 hours, with completion of “Level 3”), Quantitative Reasoning (3 hours, with each department or school recommending a subset of the “master list”), and Lifetime Fitness (1 hour).

Approaches consist of Physical/Life Sciences (7 hours), Social and Behavioral Studies (9 hours from at least 2 different departments, at least one course must “engage in historical analysis”), and Humanities/Fine Arts (9 hours, 1 course in Philosophical/Moral Reasoning, 1 Literature course, and 1 Visual or Performing Arts course).

The Connections requirements are meant to allow students to see connections across disciplines, but all courses in this area may be doubly or triply counted; in other words, these courses may also satisfy requirements in other areas of General Education (except Foundations), major requirements, or electives. Students must complete one course in each of the following areas: Communication (beyond Rhetoric A and B), Language (beyond the Foreign Language requirement), and Quantitative (beyond the Quantitative Reasoning requirement). They must also complete courses in Experiential Education, U. S. Diversity, North Atlantic World, Beyond the North Atlantic, the World Before 1750, and Global Issues. Again, all these courses may be multiply counted.

Students in the Arts and Sciences curricula must take a further 9 hours of General Education courses.

There is little evidence of assessment on the web site beyond the usual surveys. However, there is a timeline for implementation of this program (the program is just now coming into effect) that indicates a timeline for review of the courses in the General Education curriculum. This timeline implies that in reviewing program courses, the learning outcomes will be compared to program goals as one element of the review process. However, no program learning outcomes could be found on the web site.

University of North Carolina – Greensboro

UNCG has a General Education program with a rationale and goals. Students are required to complete 36 to 37 hours of coursework, although students in Arts and Sciences (other than BFA students) must complete an additional 12 hours. Students choose from lists of approved courses.

The program areas are: Humanities and Fine Arts (12 hours, one course each from Literature, Fine Arts, and Philosophical/Religious/Ethical, with an

additional course from any of these lists); Historical Perspectives – Western (3 hours); Mathematics (3 hours); Social and Behavioral Studies (6 hours); Natural Sciences (6-7 hours, 2 courses from 2 different departments); Reasoning and Discourse (6 hours); and Foreign Language (no course requirements, but students must demonstrate “proficiency at the intermediate level”).

In addition, students must complete a series of Marker Courses, although all of these courses can be multiply counted toward General Education or major requirements. Global Perspectives – 4 courses, at least one non-Western, with a maximum of 2 in Foreign Language; Writing Intensive – 2 courses, with one in the major discipline; and Speaking Intensive – 2 courses, with one in the major discipline. The courses that can be counted toward these requirements are marked in the catalog as such.

While UNCG appears to be engaging in some student learning assessment, no evidence could be found on the web site of any assessment of the General Education program.

University of North Carolina – Charlotte

UNCC does not provide much in the way of a rationale for or objectives of the General Education program. The program is divided into three main areas, with lists of approved courses for two of the areas and specific courses required in the other area. Students must take 32 to 35 hours of general education coursework.

The Fundamental Skills area consists of Writing (3 to 6 hours, depending upon initial placement), Mathematics (6 hours, with 1 course from the Mathematics list and 1 course from the Mathematics, Statistics, or Logic list), and Information Literacy. However, Information Literacy has no course requirements, as students are expected to have proficiency on arrival. There is some attention to this area in the Writing courses, but development of these skills is expected to take place in the major discipline curriculum.

The Science Area includes Physical/Life Sciences (8 hours) and Social Science (3 hours). These courses are selected from an approved list.

The Themes for Public and Private Life area is covered by specific courses (all are coded LBST, although it appears that each section of these courses is different and can focus on different topic areas). Four courses (12 hours) are required: Arts and Society, Western Tradition, Global Understanding, and Ethical Issues/Cultural Critique.

The UNCC web site contained some information about assessment of the General Education program, but it referred to the “old” program. The current program was begun in Fall 2003. While there is no indication that this new program is assessed, one may presume that it is because assessment was apparently integral to the previous program.

University of North Carolina – Pembroke

UNCP does not give a rationale for its General Education program on its web site; nor does it report any learning outcomes. The program itself is typical, requiring 44 hours of coursework organized into content areas. In some areas,

specific courses are required; in others, students may choose from a list of approved courses.

The areas are: Communication Skills (6 – 9 hours, consisting of ENG 105 and 106, and SPE 102, although students can “place out” of the speech course); Academic Content and Skills – Arts and Humanities (12 hours, with 1 course from each of the following lists – Fine Arts, Literature, History, and Philosophy/Religion), Social Science (9 hours, 1 course from each of 3 of the following 5 lists – Economics, Geography, Political Science, Psychology, and Sociology), and Natural Science/Mathematics (9 hours, with 2 courses from 2 different departments in Natural Science and 1 course in Mathematics); Physical Education/Wellness (2 hours); and General Education Electives (6 hours, or 3 hours if SPE 102 is required).

The only evidence of assessment that could be found were the ubiquitous surveys.

University of North Carolina – Wilmington

UNCW does not include on their web site a rationale for their General Education program (called “Basic Studies”.) No evidence of goals or learning outcomes could be found online. The Basic Studies program is typical, with course lists for various areas.

The areas are: Composition (3 – 6 hours, depending on placement); Physical Education (2 hours in PED 101); Humanities (12 – 18 hours, with at least 1 course from each list – Literature, History, Philosophy, and Language); Fine Arts (3 – 9 hours, with no more than 6 hours from one discipline); Natural Science (7 – 12 hours, with 1 course each in Life Science and Physical Science); Mathematics (3 – 8 hours); Social/Behavioral Sciences (6 – 12 hours, with no more than 6 hours from one discipline); and Interdisciplinary Perspectives (no minimum, but a maximum of 6 hours from this list may be applied to other Basic Studies areas).

There is a required Computer Literacy component and a required Oral Communication Competency, but there are no required Basic Studies courses. Instead, these are developed through the disciplinary major from a list of approved courses.

The only assessment activities documented on the web site were the administration of various surveys.

University of North Carolina – Asheville

UNCA has a well thought out General Education program called the Integrative Liberal Studies Program. This is a new program at UNCA, and it not a typical list-based program.

All students must take an Introductory Colloquium (3 hours) and a Senior Colloquium (3 hours) that is described as a “capstone”. All students must take the Core Cluster in Humanities (12 hours), a sequence of HUM 124, 214, and 324. In addition, all students must complete a Topical Cluster (9 hours) that investigates a topic from multiple disciplines. The Topical Cluster consists of a Natural Science course, a Social Science course, and an elective. There is an

approved list of topics and courses. Finally, there is an element that is more typical, with lists of courses by area. These areas are: Arts (3 hours, although this requirement can be fulfilled by the elective in the Topical Cluster); Writing (a 4 credit hour course called LAN 120); Laboratory Natural Science (4 hours); Mathematics (4 hours); Foreign Language (6 hours); and Health and Fitness (2 hours). To complete the program, students must complete several Intensive courses; there is no minimum number of courses here, as multiple counting is allowed (and apparently expected). The Intensive areas are Writing (3 courses beyond LAN 120); Information Literacy (2 courses, one of which is LAN 120); Diversity (1 course); and Quantitative (1 course).

UNCA has an Assessment Handbook online, which contains forms for reporting assessment results and the use of results for improvement. However, there are no direct indicators online that the Integrative Liberal Studies Program is itself assessed.

Western Carolina University

WCU appears to have given some thought to the rationale for their general education program (“Liberal Studies”), but no objectives or learning outcomes could be found on their website. The Liberal Studies program requires 42 hours of coursework, with a typical format consisting of various areas and lists of approved courses.

All students are required to take a First Year Seminar (3 hours). The rest of the program is divided into the Core (21 hours) and Perspectives (18 hours). The Core consists of Writing (6 hours, First Year Composition sequence), Mathematics (3 hours), Oral Communication (3 hours), Wellness (3 hours), and Physical and Biological Sciences (6 hours, from 2 disciplines). The Perspectives courses all emphasize writing and “information use”, and are organized into Social Sciences (6 hours, from 2 disciplines), History (3 hours), Humanities (3 hours), Fine and Performing Arts (3 hours), and World Cultures (3 hours). At least 1 course in Perspectives must be from the upper level outside of the major, and none of the courses may count toward major requirements.

The Liberal Studies program is somewhat new at WCU. Thus, there is not much evidence of on-going assessment, although there is a fair amount of detail on the web site concerning portfolios and their use in assessing outcomes. However, no outcomes are listed. WCU does appear to have a well-developed program assessment process in place. Finally, WCU has a large, vibrant, and popular program in place called “Scholarship of Teaching and Learning”. This program pulls together elements of faculty development and training with aspects of assessment.

East Carolina University

The ECU web site does not contain a search function, making it difficult to discover much about the General Education program. ECU has a typical program of 42 hours of coursework divided into topical areas with lists of approved courses. There appear to be some objectives for the program, but these could not be located.

The topical areas are Composition (ENG 1100 and 1200, 6 hours), Health and Exercise (3 hours, with at least 1 hour from each area), Humanities and Fine Arts (10 hours, with at least one course from each area), Mathematics (3 hours), Science (8 hours, with a least one laboratory course), and Social Science (12 hours, covering at least 3 “areas”).

The ECU 2002 SACS Self Study is online, and it outlines (with very little specificity) numerous assessment activities. However, there was no other information about assessment, and thus none about assessment of general education.

Appalachian State University

ASU has a typical general education framework with an interesting approach to the science portion. There is some rationale for the program, but objectives and learning outcomes could not be located on the web site.

The Core Curriculum consists of the typical division into content areas with lists of approved courses. The content areas are Composition (6 hours, ENG 1000 and 1100), Mathematics (4 hours), Social Science (12 hours, consisting of a 2 course sequence in World History and 2 more courses from 2 different disciplines), and Humanities (12 hours, 4 courses from 3 different “areas”, one of which must be a Literature course and another must be a Fine Arts course). The Natural Science area requires 8 hours, and can be either a 2 course sequence from a list or the “mini-course science sequence for non-science majors” which is a sequence of 4 two hour courses.

There does not appear to be any assessment of the Core Curriculum, although ASU does administer some skills tests to students in addition to the ever present surveys.

Winston Salem State University

The general education program at WSSU is atypical in that there are no lists of courses that student may choose from. Students get very little choice in their general education curriculum. However, WSSU does have a rationale for this approach although no objectives or learning outcomes could be gleaned from the web site.

The program consists of Freshman Seminar (1 hour), Communications (9 hours, ENG 1301 and 1302 and SPC 2341), HPE (3 hours, HED 1201 and 1 activity course), Humanities (9 hours, ENG 2301, ART or MUS 1301, and HUM 2310), Science and Mathematics (9 hours, BIO 1301, PHY 2336, and MAT 1311), and Social Science (9 hours, students select three courses from HIS 1302, POS 2311, PSY 2301, and SOC 2301).

No indication of any assessment activity could be found on the web site.

North Carolina A&T State University

The general education program at NCATSU is typical, with division into content areas and lists of approved courses. No rationale, objectives, or learning outcomes could be found on the web site.

The Core Requirements are English (6 hours), Social Science (6 hours), Natural Science (6 hours), Humanities (6 hours), Mathematics (6 hours), and Health and Physical Education (2 hours). In addition, each student must complete a 3 hour African-American Studies course from an approved list and a 3 hour Global Studies course, also from an approved list. These requirements can be fulfilled through the Core Curriculum, the major curriculum, or electives.

No evidence of assessment of learning outcomes could be found on the web site beyond the inevitable surveys.

Fayetteville State University

The general education program at FSU is divided into the typical content areas, with some areas having lists of approved courses from which students may choose and others specifying the courses that students must take. No rationale, objectives, or learning outcomes could be found on the web site.

The Core Curriculum consists of a Freshman Seminar (2 hours), Critical Thinking (3 hours, PHIL 110), English (6 hours, ENGL 110 and 120), Speech (3 hours, SPEC 200), Health and Physical Education (2 hours, list), Mathematics (6 hours, list), Natural Science (8 hours, list), History/Social Science (3 hours, list), and Humanities/Fine Arts (3 hours, list). In addition, there is a Computer Literacy component that is addressed through the major curriculum (no Core Curriculum requirements).

FSU appears to have a developing assessment program with major field tests and other similar tests of student learning in addition to the ubiquitous surveys. However, there does not appear to be any assessment of the Core Curriculum itself.

North Carolina Central University

The general education program at NCCU is called "Critical Foundations in Arts and Sciences". It consists of 42 hours of coursework, with prescribed courses and little or no choice for students in how they fulfill the requirements. No rationale, objectives, or learning outcomes could be found on the web site. However, NCCU is currently completing a plan to transform their general education program to a typical "list of courses" approach. The new program is expected to be in place by Fall 2005. It appears that progress is being made to include objectives and learning outcomes in the new program.

The current program consists of English Composition I and II (6 hours), Speech (3 hours), Foreign Language (6 hours in the same language), Science (4 hours), Mathematics (3 hours), Society and Human Behavior (3 hours), World Societies (3 hours), Arts and Humanities I and II (6 hours), Dimensions of Learning (3 hours), Health (2 hours), and Wellness (2 hours). Most of these courses share the CFAS prefix and are numbered from 1110 through 1541.

No evidence of any current assessment activity could be found on the web site. It appears that NCCU had an Office of Research, Evaluation, and Planning, but this office is no longer listed on the web site and no current reference to it could be found.

North Carolina School of the Arts

The general education program at NCSA is somewhat unconventional, as one might expect at an institution so clearly focused on one theme. No evidence of a rationale, objectives, or learning outcomes for the program could be found on the web site.

The General Studies program consists of ENG 101, 102, and 103 (Reading, Writing, and Oral Communication), GES 101, 102 and 103: Critical Perspectives (6 credits of Art, Literature and Poetry), GES 190 (a 2 credit freshman seminar), and GES 211, 212, and 213: Foundations of Western Thought (6 credits). In addition, students are required to complete “study” in each of the following areas: Fine Arts/Humanities, Social and Behavioral Studies, and Mathematics/Natural Science. It is not clear precisely what is meant by “study” in these areas, as there are no specific requirements posted on the web site. It may be that each major or department sets the specific requirements in these areas.

No evidence of assessment activity could be found on the web site.

Elizabeth City State University

The ECSU web site is rather confusing, and it is difficult to determine what the general education program looks like. Currently, there is no search function on the ECSU web site.

Appendix E

Mission Statement: North Carolina State University

The mission of North Carolina State University is to serve its students and the people of North Carolina as a doctoral/research-extensive, land-grant university. Through the active integration of teaching, research, extension, and engagement, North Carolina State University creates an innovative learning environment that stresses mastery of fundamentals, intellectual discipline, creativity, problem solving, and responsibility. Enhancing its historic strengths in agriculture, science, and engineering with a commitment to excellence in a comprehensive range of academic disciplines, North Carolina State University provides leadership for intellectual, cultural, social, economic, and technological development within the state, the nation, and the world.

Mission Statement: Undergraduate Education (DRAFT)

The mission of undergraduate education at North Carolina State is to enhance our students' lives by providing a rich environment for a wide range of academic and non-academic learning experiences, including focused study in a major, inquiry into a variety of disciplines, and participation in extracurricular activities. In this environment, students have the opportunity to gain strong competencies in one or more academic or professional disciplines; to broaden their comprehension of the world; to learn to solve problems effectively in a variety of situations; to understand and appreciate diversity of cultures, values, and worldviews; to develop greater self-awareness and the ability to make principled choices; and to integrate the variety of experiences that have comprised their education so that they may better understand and act responsibly in a complex world.

Mission Statement: General Education (DRAFT)

The mission of general education is to provide students the opportunity to experience diverse and integrative disciplinary perspectives. General education enhances students' intellectual engagement in their majors, prepares them for the changing demands of professional careers, equips them for a lifetime of learning, and lays the foundation for involvement in their communities as responsible citizens and leaders.

Rationale: General Education (DRAFT)

General Education at NC State provides the opportunity for a broad and informed understanding of the world, offering our students the foundation for rich and productive lives. General education is valuable for students because logical and creative thinking are fundamental to improving the human condition; because a respect for the value of diversity and an understanding of human history and cultures are essential to true citizenship; because the development of global knowledge has become increasingly important in response to international interdependence; because knowledge of science and the ability to apply scientific reasoning provide the basis for an appreciation of the workings of the universe

and the richness, variety, and ecological interconnectedness of the world around us; because well-considered moral, philosophical, aesthetic, and intellectual convictions are necessary for contributing to human thought and achievement; because effective communication is central to productive engagement in academic, professional, and civic communities; because an ability to understand and evaluate the interaction among science, technology, and society is important in a world that is changing through technological innovation and scientific discovery; and because the development of attitudes and skills for a healthy life is essential to social, mental, and physical well-being.

Appendix F

Partial List of Presentations

Council on Undergraduate Education (CUE): September 1, 2006 (Ambrose and Dupont)

Academic Policy Committee of the Faculty Senate: September 1, 2006 (Ambrose, Ash, and Dupont)

CALS Undergraduate Coordinators: September 5, 2006 (Esbenshade)

PAMS Undergraduate Academic Advisory Committee: September 5, 2006 (Cohen)

CHASS Department Heads: September 6, 2006 (Severin)

Student Senate: September 6, 2006 (Ambrose and Barnes)

Associate Deans' Meeting: September 7, 2006 (Ambrose and Dupont)

First Year College: September 8, 2006 (Ambrose and Hawkins-Morton)

Vice Provosts' Meeting: September 11, 2006 (Ambrose and Dupont)

Faculty Senate: September 12, 2006 (Ambrose and Dupont)

University Courses and Curricula Committee (UCCC): September 13, 2006 (Ambrose)

CHASS Faculty: September 15, 2006 (Severin)

Academic Support Program for Student Athletes & Division of Undergraduate Academic Programs: September 19, 2006 (Hawkins-Morton and Dupont)

CHASS Faculty: September 29, 2006 (Ambrose, Ash, Robison, Severin, Lavelle, and Dupont)

Advisers' Roundtable: October 3, 2006 (Ambrose and Hawkins-Morton)

After revisions, the following presentations were made:

Deans' Council: December 7, 2006 (Ambrose and Dupont)

College of Design (Dean, Associate Dean, Department Heads): December 19, 2006 (Dupont)

General Faculty Meeting (sponsored by the Faculty Senate): January 17, 2007 (all GERTF members)

Appendix G

A History of the General Education Requirements at NC State University

1978– 79

The Provost's Forum discussions result in the formation of an ad hoc committee (Jenkins Committee) to study general education at NCSU. In September 1979, the Jenkins Committee submitted recommendations for areas of study and for implementation considerations.

1980

In response to the Jenkins Committee's recommendations, the Provost's Forum Committee on Core Curriculum was formed. This group widely polled the campus and determined that further discussions needed to take place.

1984-85

In August 1984, the Commission on Humanities and Social Sciences (Fairchild Commission) was formed to consider the role of humanities and social sciences at NCSU. They conducted surveys, formal interviews, and solicited general comments through informal hearings. The recommendation by this commission was to establish a core curriculum and outlined minimal and optimal core curricula and hours.

1985-87

In October 1985, a Commission on Undergraduate General Education (the Bland Commission) was formed to broaden the discussion about general education beyond the College of Humanities and Social Sciences. The Commission made extensive recommendations, increased involvement of University Committees and brought NC State faculty closer to consensus concerning changes needed for general education.

1988

One result of the Bland Commission study was awareness that no formal committee/mechanism was in place for accepting and implementing changes in general education. In response, the [Council on Undergraduate Education](#) (CUE) was formed in April, 1988.

1988-91

The [Council on Undergraduate Education](#) met to study and make preliminary recommendations for the implementation of general education requirements. It aimed to take the recommendations to date for areas of study and achieve a balance in breadth and depth, and in structure and freedom.

1992

May 1992, Council of Deans and Provost approved CUE's recommendation to implement new general education requirements (GERs) in fall of 1994. August 1992, a new deanship (dean of Undergraduate Studies now the Vice Provost for

Undergraduate Affairs) was created to oversee the general education requirements and its assessment.

1993-94

Mission Statement for Undergraduate Education was adopted. New General Education Requirements implemented. Long-range assessment plan that identified priorities for assessing general education was created by CUE and a sub-group on evaluation was created. The NC State Writing Work Group (WWG) was established to examine Writing and Speaking requirement.

1994-95

CUE decides to redraft all rationale statements for purpose of future evaluation of achievement of outcomes. The Riverside Base is considered as assessment instrument and decided it was not a good fit for NC State University. NC State Writing Work Group worked with appropriate faculty to revise GER outcomes and consider the impact of the implementation of the GER on enrollments in specific courses.

Questions about GER goals/ outcomes were added to the First Year, Senior, and Alumni surveys.

1995-96

NC State Writing Work Group recommends two upper level courses as amendment to Writing and Speaking requirement. The Math, Natural Science and Writing and Speaking rationales are rewritten for purpose of future evaluation of achievement of outcomes.

1996-97

The rationale statements for Science, Technology and Society and the Humanities and Social Sciences were rewritten for the purpose of future evaluation of achievement of outcomes. Faculty teaching GER courses were surveyed regarding activities used to incorporate GER objectives in course instruction. CUE engaged in Critical Thinking workshops and considered pedagogical links to General Education. The PE requirement was revised so that only two courses would meet the two-credit requirement rather than the four courses. Results of graduating senior survey assessment showed need to improve learning in arts and in ethics.

1997-98

NC State Writing Work Group recommendation to include two upper level courses in the Writing and Speaking requirement was not approved and the requirement was amended to indicate upper level Writing and Speaking competencies be incorporated into individual curricula with oversight via the colleges. CUE members participate in Hewlett Initiative to model inquiry-guided learning models into GER courses. CUE considers but does not approve a diversity component to GER after lack of consensus in definition and implementation factors. CUE engages campus community to improve GER

specific advising. On the recommendation of the Arts Advisory Council, CUE requests instructional resources to expand offerings in the arts. Questions about GER goals/outcomes were added to Sophomore Surveys.

1998-99

CUE conducts student focus groups to assess the degree to which students understand the GER program and cites concerns in advising and teaching of GER rationales within courses. CUE reconsiders the current GER structure in terms of requirement by content/discipline versus requirement by competency and recommends against a broad restructure at this point.

2000-01

CUE assumes from UCCC the approval of courses for GER and develops criteria for approving or removing courses. CUE works with newly formed Committee on Undergraduate Program Review to advise on GER competencies relegated to program review. As a result of the 1999 student focus group concerns, CUE develops a GER brochure targeted to entering freshmen. CUE amends the title of the HSS Advanced list to the HSS Additional list. A CUE subcommittee recommends that Science, Technology and Society be a stand-alone requirement and to merge the perspective course lists. CUE considers request to require Literature in the GER. CUE considers revision of the Communications and Information requirement to more accurately reflect the current conditions.

2001-02

Writing and Speaking requirement revised from 9 hours to 7 hours and the Humanities and Social Sciences requirements were realigned. CUE concludes survey data does not provide information for improving GER courses and drafts a proposal for course-based assessment of the GER. As a result, CUE began drafting objectives for each GER area to later be aligned with learning outcomes in GER courses.

2002-03

CUE endorsed a proposal for course based assessment and drafted assessable objectives for each GER area; objectives were developed in consultation with the subject disciplines and their administrators. CUE initiated a pilot project to test the course assessment process in 10 GER courses. CUE considered but did not approve a request to remove the Physical Education requirement from the GER. CUE considered a request to include an environmental component to the GER.

2003-04

CUE endorsed a timetable for review of all GER courses for course assessment components starting in 2008. Selected courses from each college will be developed per the assessment process between 2004 and 2008 to become models for all others undergoing review starting 2008. Pilot study was completed and refinements were made in GER assessment process. Training sessions for GER instructors offered. Procedures for all new GER courses to be approved per the course assessment model were implemented. CUE delivered a statement to

the Provost on the impact of resources on offerings of GER courses.

Items in this document have been adapted from:

- *the annual report of the Council on Undergraduate from 1994-2004*

- *“Assessing General Education at NC State”*

http://www.ncsu.edu/undergrad_affairs/assessment/files/ger/history_of_assess.htm#upa

- Jarrett, B.H., Green, R.L. (1993). *Brief History of General Education at North Carolina State University (1978-1993)*. Office of University Planning and Analysis, NCSU.

Appendix H

Timeline for GEP Implementation

June 29, 2007: Complete proposal presented to Provost

July 2007:

Committees appointed by DUAP to populate the new categories (Additional Breadth – Engineering; U.S. Diversity; Global Knowledge; and Interdisciplinary Perspectives) in collaboration with CUE. Jose Picart has tentatively agreed to chair the U. S. Diversity committee, and Balian Li has tentatively agreed to chair the Global Knowledge committee. Lists to be submitted to CUE by late fall 2007.

Committee appointed by DUAP to finalize the details of the Theme option. Committee will also work with CUE and appropriate faculty members to develop a small number of themes (three or four) in time to pilot this option before full rollout of the new GEP in fall 2009.

August 2007:

New GEP announced to the campus. DUAP will make presentations to colleges, departments, and other groups as requested.

All colleges and departments to begin considering which of their courses currently on GER lists that they would like to include on the new GEP lists (default option is that all courses roll over as noted in the proposal). Notification due to CUE by October 15, 2007.

All programs begin revising their curricula to reflect the new GEP. Programs making only minor adjustments should submit their new curricula to UCCC no later than March 1, 2008. Programs making major curricular revisions (including adding new courses) should submit their new curricula to UCCC no later than November 1, 2008. Programs developing new courses for the IP lists should also be submitted to UCCC by November 1, 2008.

The Office of Assessment in DUAP will begin to collect assessment data related to the GEP outcomes (survey data, information from Student Affairs, information from program assessment reports, and other applicable sources) and carry out necessary preliminary work to pilot the “sampling” approach in summer 2008 as outlined in the proposal under “Assessment”.

October 15, 2007:

Programs notify CUE of their decisions concerning rollover of courses from existing GER lists to new GEP lists.

September 2007:

CUE develops detailed plan for reviewing courses on the current GER lists that were not approved under the current guidelines. The GERTF recommends that this review process take place over three years, beginning no later than spring 2008, and address approximately one-third of such courses each year. For courses on the new category lists (see above), if they are currently on a GER list and have been approved under the current guidelines no further review is necessary; if they are on a current GER list but have not been reviewed under the current guidelines they will be reviewed at the appropriate time on the three year schedule; if they are not currently on a GER list then they will be reviewed immediately (as they are added to the list).

CUE will re-examine current and proposed category rationale and objectives during the fall of 2007.

March 1, 2008: All programs making minor curricular adjustments will have their curricula to UCCC by this date.

August 15, 2008:

Pilot sampling assessment completed, with preliminary report to CUE, Associate Deans and to UPA for use for SACS compliance and UNC-GA accountability needs. Report on other general education assessment projects to follow within the month.

November 1, 2008: All programs making major curricular revisions will have their curricula to UCCC by this date.

New courses for Interdisciplinary Perspectives list, particularly courses that will affect curricula (introductory and general education capstone courses, if applicable), submitted to UCCC by this date.

January/February 2009: Information for new students entering Fall 2009 will be available.

August 15, 2009: Assessment done in 2008/2009 reported to CUE, Associate Deans, and to UPA for use for SACS compliance and UNC-GA accountability needs. Report on other general education assessment projects to follow within the month.

Fall 2009:

New General Education Program substantially in place for entering Fall 2009 cohort. New courses (particularly for those categories with short lists) and themes will continue to be developed in an ongoing process.

Appendix I

A Sampling of Courses Representing U.S. Diversity and Global Knowledge

U.S. Diversity

AFS (ENG) 375 African American Cinema
AFS (ARS) 346 Black Popular Culture
ENG (AFS) 258 Survey of African-American Literature
HI 252 Modern American History
Soc 203 Current Social Problems
SOC (WGS) 204 Sociology of the Family
PS 204 Problems in American Democracy
PS 303 Race in U.S. Politics
REL 323 Religious Cults, Sects, and Minority Faiths in America
WGS 200 Introduction to Women and Gender Studies
FLS Introduction to Hispanic Literature
MUS (WGS) 360 Women In Music
MUS (AFS) 260 History of Jazz
ARS 354 The Arts and the Sacred
MUS (AFS) 230 Introduction to African-American Music

Global Knowledge

ANT 252 Cultural Anthropology
ANT 261 Technology in Society and Culture
ANT 254 Language and Culture
COM 392 International and Crosscultural Communication
FL 216 Art and Society in France
HI 233 The World in the 20th Century
HI 270 Modern Middle East
PS 231 Introduction to International Relations
PS 236 Issues in Global Politics
PS 241 Introduction to Comparative Politics
PS 345 Governments and Politics in the Middle East
PS Politics of China and Japan
REL 331 The Hindu Tradition
REL 340 Islam
MUS 351 World Music II: Music of Africa and the Americas
MUS 350 World Music I: Music of Asia

APPENDIX J

FORMAT B – Current GER Format

LIST OF CURRICULUM REQUIREMENTS

Curriculum Title and Code: _ Bachelor of Science in Mathematics

| <u>NCSU GENERAL EDUCATION REQUIREMENTS</u> | | <u>Designated Courses:</u> | |
|--|---------------------------------|----------------------------|------------------------------|
| <i>Area of Study</i> | <i>Minimum Credits Required</i> | <i>Current Credit Hrs</i> | <i>Proposed Credit Hours</i> |
| Orientation E 115 or PMS 100 | 0 | 1 | |
| Mathematical Sciences MA 141 MA 241 | 6-9 | 4 4 | |
| Natural Sciences (Basic/Other) CH 101 CH 102 PY 205 and 208 or PY 201 and PY 202 | 11-14 | 3 1 8 | |
| Writing and Speaking ENG 101 ENG 331,332,333 or COM 110,112,146,211 or FL at 200 level or higher | 7 | 4 3 | |
| Humanities Choose from GER list | 9-15 | 12 | |
| Social Sciences Choose from GER list | 6-12 | 6 | |
| Science, Technology, & Society Choose from GER list | 3 | 3 | |
| Physical Education PE 1xx PE Fitness and Wellness course | 2 | 1 1 | |
| Free Electives | 0 | 14 | |
| Foreign Language Proficiency | FL_102 | FL_102 | |
| Computer Literacy | ☒ | satisfied | |

| MAJOR FIELD OF STUDY: | | | <i>Total Credits</i> |
|------------------------------|--|---|----------------------|
| <u>Required Courses:</u> | | | |
| MA 242 | | 4 | |
| MA 225 | | 3 | |
| MA 341 or MA 351 | | 3 | |
| MA 407 | | 3 | |
| MA 405 | | 3 | |

| | | | |
|---|--|--------|--|
| MA 425 | | 3 | |
| MA Electives (LOG 335, MA 325, MA 335, and MA 400> (except 403,.433, 507, 508, 509, 510, 511) | | 18 | |
| <u>Restricted Electives:</u> | | | |
| Science/Engineering electives list | | 6 | |
| Business/Computer Sci/Stat elective list | | 6 | |
| Computer Science (CSC 110,112,114,116 or MA 116) | | 3 | |
| Probability/Statistics (MA 421 or ST 370,372 or 380) | | 3 | |
| <u>Advised Electives:</u> | | Co-req | |
| Major Paper requirement (2 courses) | | | |
| | | | |
| MINIMUM CREDIT HOURS REQUIRED: 120-128 | | 120 | |

APPENDIX J

FORMAT B – New GEP Format

LIST OF CURRICULUM REQUIREMENTS

Curriculum Title: Bachelor of Science in Mathematics

Curriculum Code: MA

| <u>MAJOR FIELD OF STUDY:</u> | | |
|---|---------------------------|------------------------------------|
| <i>Area of Study and Designated Courses</i> | <i>Credit Hours</i> | <i>GER category, if applicable</i> |
| <u>Required Courses:</u> | 45 hours total | |
| <u>Basic Math</u> | | |
| MA 141 | | Mathematics |
| MA 241 | 4 | Mathematics |
| MA 242 | 4 | |
| MA 225 | 4 | |
| GRP 001 (MA 341 or MA 351) | 3 | |
| | 3 | |
| <u>Advanced Math</u> | | |
| MA 407 | | |
| MA 405 | 3 | |
| MA 425 | 3 | |
| GRP 002 -Math Electives | 3 | |
| (LOG 335, MA 325, MA 335, and MA 400> (except MA 403, 433, 507, 508, 509, 510, 511) | 18 | |
| <u>Restricted Electives:</u> | 30 hours total | |
| <u>GRP 005– Science/Engineering</u> | | |
| (BIO 125, 181, BO, CE, CH, ECE, GN, IE, MAE, MSE, MB, MEA, NE, NTR, OR, PP, ZO***, ECI 305,416, EMS 470,480, PY 300>) | 6 | |
| <u>GRP 006– Business/Computer Sci/Stat</u> | | |
| (ACC***,BUS***,EC***, CSC***except CSC 100, 200, ST 300> except ST 311, 361, BIO 125, 181, BO, CE, CH, ECE, GN, IE, MAE, MSE, MB, MEA, NE, NTR, OR, PP, ZO***, ECI 305,416, EMS 470,480, PY 300>) | 6 | |
| CH 101 | 3 | Natural Science |
| CH 102 | 1 | Natural Science |
| <u>OPT 001 – Physics Sequence</u> | | |
| (PY 205 and PY 208 or PY 201 and PY 202) | 8 | Natural Science |
| <u>GRP 003- Computer Science</u> | | |
| (CSC 110 or 112 or 114 or 116 or MA 116) | 3 | |
| <u>GRP 004-Probability/Statistics</u> | | |
| (MA 421 or ST 370 or ST 372 or ST 380) | 3 | |

| | | |
|---|---------------------------|--|
| Advised Electives: GRP 010 – Major Paper requirement (2 courses- co-requisites) (BMA 573, 574, MA 402, 427, 428,432,433, 435,437,491, 494,544,573,574) | 0-3 hours total 0-3 | 0-3 hours b/c 433 cannot be double-counted w/ MA electives |
| Total credit hours required in Major field of study: Minimum 27 hours | 75- 78 hours | |
| COLLEGE/PROGRAM REQUIREMENTS: | | |
| Free Electives: <i>Currently subset for FE listing courses that do not count toward free elective.</i> | 14-15 | Depending on IP courses |
| Orientation: E 115 or PMS 100 | 1 | |
| Other: Advanced Writing and Speaking Requirement: Satisfied by Eng 331, 332, 333, Com 110, 112, 146, 211, FL at the 200 level or higher | 3 | |
| Total credit hours required for College/Program Requirements: | 18 hours total | |

| NCSU GENERAL EDUCATION REQUIREMENTS | | |
|--|---------------|--|
| <i>Courses in majors and/or minors may also count as a General Education requirement; however, a GER category may not be subset to require a course listed in the major.</i> | | |
| <i>General Education Requirements:</i> <i>Minimum 39-40 hrs</i> | <i>Credit</i> | <i>How Requirement is met</i> |
| Mathematical Sciences (<i>minimum of 6 credits</i>) (at least one with MA or ST prefix) | X | Minimum requirement satisfied by major course requirements |
| Natural Sciences (<i>minimum of 7 credits</i>) (at least 1 laboratory) | X | Minimum requirement satisfied by major course requirements |
| English 101 | 4 | ENG 101 |
| Humanities (<i>minimum of 6 credits</i>) (from two different disciplines) | 6 | Choose from GER list |
| Social Sciences (<i>minimum of 6 credits</i>) (from two different disciplines) | 6 | Choose from GER list |
| Additional Breadth (<i>minimum of 3 credits</i>) (from discipline outside of major) | 3 | Choose from GER list in Humanities, Social Science or Visual and Performing Arts |

| | | |
|---|----------------|--|
| Interdisciplinary Perspective <i>(minimum of 5-6 credit s)</i> (at least one must include content from both HSS & STEM disciplines) | 5-6 | Choose from GER list |
| Physical Education/Healthy Living (including one Fitness and Wellness course) | 2 | Choose from GER list |
| U.S. Diversity co-requisite | X | Choose from GER list |
| Global Knowledge co-requisite | X | Choose from GER list |
| Foreign Language Proficiency | X | FL_102 |
| Writing and Speaking | X | Satisfied by major course requirements (major paper in two courses) |
| Total credit hours required to complete Degree: Minimum 120-128 hours | 120-123 | |

Appendix K

General Education Program Assessment Plan

The GERTF considered five possible approaches to assessing student achievement of the GEP objectives.

1. Continue the current model: This appears to be the least desirable option, given the concerns outlined above. However, specific general education learning objectives may be selected for special attention as a result of other assessment activities. In those cases, a course-based assessment model could be utilized in conjunction with special assistance and support from the Office of Assessment and other assessment professionals on campus. In other words, this approach would be used in specific situations in which significant resources could be targeted to assist faculty members in answering limited questions about student achievement of selected general education learning objectives.

2. Sampling: This would consist of sampling student work from a variety of courses from specified GEP lists each year, and having a group of faculty members review the student work using various rubrics. The student work (“artifacts”) would be chosen by reference to the Course Action Forms and supporting documentation of the courses selected. The Course Action Forms outline the specific student learning outcomes for each course that support the GER Category Objectives, along with means of assessment of these outcomes. Typically, these consist of exam questions, essays, student projects, and other types of student work as defined by the course instructors. This is not the same as a portfolio approach, since the selected artifacts would come from a variety of students and they would be those artifacts that illuminate student achievement of the category objectives from the specified lists. By selecting courses from just two or three of the category lists each year, the workload could be kept reasonably small. The reviewers would almost certainly have to be compensated in some way for their work. There are a number of details that would have to be worked out, including how many samples of student work to collect, the collection methodology, the rubrics to be used, selecting or recruiting faculty members to review the work, and whether the sampling should be restricted to general education courses or should also include senior level courses. These details are addressed in the “Implementation” section below.

3. Include assessment of general education objectives in the undergraduate program review and assessment process: From an administrative standpoint, this might be the simplest approach as it merges two separate processes into a single process. On the other hand, it is not clear exactly how program faculty in Humanities (for example) would collect student work and assess general education objectives in the Natural Sciences (or vice-versa). This approach has the additional disadvantage of making what is happening in general education assessment dependent on program assessment such that if program

assessment were to fall behind in certain departments, so would general education assessment, leaving undergraduate assessment more vulnerable as re-accreditation neared. This approach could potentially slow the entire process, as the Office of Assessment in DUAP would have to compile the general education aspects of all of the program assessment reports and create a separate GEP assessment report. However, most undergraduate programs do assess their students' writing abilities (as an example) and thus in this case the undergraduate program review process can contribute to general education assessment. There may be other areas in which this could take place and an examination of undergraduate program annual reports will be reviewed to identify such areas.

4. Standardized testing: This approach is deceptively seductive, as it is relatively easy to implement. Unfortunately, no standardized test will cover the full range of objectives of the GEP. There are tests that cover specific disciplines (for example, the American Chemical Society has created a test that purports to cover the essential learning outcomes of undergraduate chemistry), but it is not clear that they would cover the specific objectives in the various GEP categories. It is conceivable that such tests could be developed at NC State, but developing these tests would be a lengthy and expensive proposition. Student motivation issues always arise in the administration of standardized tests unless the results impact student grades in some way, which would imply testing all students and/or asking faculty members to include the results in their grading structure. Neither of these options seems likely to succeed. The students could be paid to take the tests, but this is itself expensive and it is unclear that it would lead students to put forth their best efforts. However, standardized testing is relatively easy to implement and provides a method for comparing some types of student achievement at NC State with the achievements of students at other institutions. It should be noted that there are strong indications that the UNC General Administration will soon require all UNC institutions to administer the Collegiate Learning Assessment (CLA) and publicly report the results. Since we may be required to administer this instrument, it makes sense to attempt to use it for general education program enhancement.

5. Portfolio approach: Gathering portfolios of student work when they have completed the GEP or when they are about to graduate provides a mass of detailed and direct evidence of student learning. Students are asked to add work to their portfolio from courses that indicate their achievement of learning objectives. In the case of general education, students would continue to "build" their portfolio until they completed the general education program. Upon completion of the portfolios (whether upon graduation or completion of the general education program), a sample of all the portfolios is selected. The portfolios are evaluated by a faculty team to assess student achievement of the general education learning objectives. This approach has been suggested by a number of nationally prominent assessment professionals, and there has been some discussion of sharing portfolios between different institutions in an effort to

externally validate the evaluations. The downside is that portfolios can be incredibly expensive to implement; faculty must be trained to guide students in building their portfolios, students must be guided in what to include in their portfolios and must be constantly reminded to populate them with the appropriate artifacts, and a faculty team must review the portfolios and evaluate student achievement of all the general education objectives. This is in addition to any costs associated with software licensing if an electronic portfolio is used. These costs may help to explain why to date so few large universities have successfully used a portfolio assessment system for general education, although portfolios have been used for program assessment at some institutions.

As noted in the body of the report, the GERTF recommends that elements of all five approaches be employed. However, the “sampling” approach would require additional resources to implement and the GERTF recommends that this approach be piloted beginning in fall 2007. During the academic year 2007-2008, the Office of Assessment (DUAP) will gather information from a variety of sources that may illuminate student achievement of the GEP objectives parallel with the pilot implementation of the sampling approach.

Implementation

Each year, courses from selected GEP category lists would be randomly chosen. The faculty members teaching those courses would be notified at the beginning of the semester and asked to submit student work (along with the prompt for the work) that illustrates student achievement of the course outcomes related to the category objective. This could include exam questions and answers, essays, problems, or other written work as previously identified by instructors in their Course Action Forms. The number of courses or sections selected, and the number of student artifacts submitted by each faculty member, is yet to be determined. It is not necessary to get a large enough sample for statistical validity, but the sample must be large enough to provide information that is persuasive.

When the student work has been gathered, the Office of Assessment would remove the identifying information and assign a unique number to each artifact. In this way, the work could be tracked back to particular courses and students for analytical purposes, but the evaluators would not know either the student or the faculty member who taught the student.

A group of faculty members would be recruited in advance to evaluate the artifacts. This group would be paid a stipend for their work, and the actual evaluation would take place in the summer. In addition, rubrics would be developed (or found) and the evaluators introduced to the rubric and the standards in a workshop. An upper bound estimate for this is approximately \$25,000 per year, assuming 25 faculty members are paid \$1,000 each. This stipend would cover training in the use of the rubric, the actual evaluations of student work, and a closing session to address any issues that might arise in the course of the evaluations. This group of evaluators would have to be large enough to represent the disciplines being assessed and to include at least one

faculty member to assess critical thinking (using a rubric) and the mechanics of writing (also using a rubric).

The broad categories of the general education program would be assessed using the sampling approach as follows:

- Humanities, Social Sciences, and Diversity: Every two years
- Mathematics, Natural Sciences, and Global Knowledge: Every two years
- Critical Thinking: Each year (as part of the assessment of the other categories)
- Writing: Each year (assessed as part of undergraduate program assessment and as part of the assessment of the other categories; both in collaboration with the English Department)
- Interdisciplinary Perspectives: Each year initially; rotating schedule after the first three years
- Physical Education: Every other year

Additionally, the results of the CLA (if it is made mandatory) may provide broad indicators of student achievement that could point to areas where more intensive assessment efforts are needed. Furthermore, as program assessment matures across campus it is likely that those results will become more useful for general education. In this way, the assessment of general education at NC State will develop to include more means and methods.

The results of the assessments will be collated by the Office of Assessment in DUAP and reported to the CUE and the university at large. It is anticipated that the CUE and DUAP will analyze the results and make recommendations for changes in the GEP as appropriate.