

**College of Arts and Sciences Curriculum Initiative**  
**As Amended by the SAS Faculty**  
**Adopted, April 11, 2005**

**I. Introduction**

Outstanding students from the United States and around the world come to the College of Arts and Sciences at the University of Pennsylvania to study with faculty who have achieved preeminence in their disciplines. A primary mission of the faculty of the College is to provide these students with an undergraduate education in the arts and sciences that is second to none. The purpose of this document is to enunciate the educational goals we set for our students and to describe the structure of the curriculum we will establish in order to attain them.

The College's new curriculum is being developed via a consultative process that has obtained input from hundreds of faculty members, students, alumni, and others. It draws upon lessons learned from our experience over the past 20 years with the General Requirement as well as on the Pilot Curriculum controlled experiment.

The new version of the College's general education requirements will be more flexible and simpler to navigate, while placing new emphases on understanding and comparing different cultures and on modern and rigorous science education for non-science majors. It will emphasize the integration of knowledge across disciplines common to the successful courses in the Pilot Curriculum and encourage undergraduate research and civic engagement.

## **II. Mission**

America at the beginning of the twenty-first century is beset by numerous social, economic, cultural and scientific challenges. The response of many institutions of higher learning is to place increasing emphasis on specialized skills and knowledge, and upon the attainment of professional credentials. Even at Penn, the College is surrounded by schools that provide postgraduate professional training and by undergraduate schools that emphasize training for specific vocations. In this environment, the College reaffirms its belief in and commitment to a thorough education in the arts and sciences. We expect our graduates to be broadly-educated people who have acquired the knowledge, skills, and inclination that will enable them to embark on a lifetime of learning; to assume positions of leadership in their chosen careers; to be independent, creative thinkers; to be able to adapt to rapidly-changing circumstances; and to become thoughtful, engaged citizens of their community, nation and world.

Within the framework of this broad arts and sciences education, our students should develop a deep understanding of one discipline. It is in this spirit that the College curriculum has required, and shall continue to require, each of its students to pursue a major as well as to fulfill a set of general education requirements. The purpose of the major is clear: it provides an intellectual “home base,” and a perspective from which to understand, criticize, engage with and improve the world. But in order to do so constructively, our students must also appreciate the importance and relevance of fields in which they have not developed particular expertise. Helping students to develop this appreciation is one of the primary goals of our general education requirements.

The College curriculum is thus bifurcated into the major requirement and the general education requirements. The structures of the various majors in the College are determined by the faculty in the relevant discipline or disciplines. The main part of this report is a proposal for a set of such requirements to replace the current General Requirement of the College.

### **III. General Education in the College**

Our conception of general education in the College is two-fold. One purpose is to provide a wide-ranging intellectual basis for further study in a specific discipline and for the appreciation of various approaches to ideas, problems, and issues. The other is to hone a set of core competencies that will enable our students to become effective and self-motivated learners.

#### **III.A. History and Philosophy**

On the whole, the College's general education curriculum has served our students well. However, over the course of the years since it was enacted in 1987, faculty and students have voiced concerns as the General Requirement curriculum evolved, the world changed, and the College and its students have changed. For example, the number of courses that can satisfy the general requirement has grown substantially and now includes many courses that are not particularly intended to serve students not intending to major in the discipline. Also, the curriculum suffers from "requirement sprawl" – new requirements have been added (e.g., writing, quantitative data analysis), each of which serves a worthy goal, but it is no longer clear that the totality of requirements represents a coherent academic vision.

In response to these and other issues, the College launched the Pilot Curriculum, an alternative way of organizing undergraduate education offered to 200 students each year beginning in the fall of 2000. Students in the Pilot have fewer general requirement courses, but these courses are more precisely specified and are designed to introduce a wide variety of disciplines and modes of investigation. Pilot students are also required to complete a research project.

The Pilot Curriculum was implemented as a controlled experiment, in the sense that the set of students who applied to be part of the Pilot program were randomly assigned to two equal groups, one group following the Pilot Curriculum and the other following the older General Requirement curriculum. In 2004, the Pilot Curriculum Evaluation Committee issued a report on its observations of these students' patterns of course selection, majors, study abroad, and various other aspects of undergraduate education. By and large, the committee observed little variability from one group to the other along almost every axis.

An important lesson to be learned from the Pilot Curriculum report is that the College of Arts and Sciences in fact has an academic culture and curriculum that is resilient and generally independent of the set of requirements imposed on the students. In particular, we learned that there are a number of courses (e.g., basic economics, calculus, psychology) that students will take in large numbers, whether or not they are required. We also learned that some students will avoid some areas (e.g., "hard" science) if not required, or will select paths of least or no resistance to fulfill loosely-defined requirements.

Thus, it is important to make a strong distinction between the general education *curriculum* of the College and the general education *requirements* of the College. Course enrollment data, requirement worksheet data and student survey data all indicate that students will flock to courses they recognize as important and/or compelling, even without coercion. On the other hand, we learned that the complexity of the current General Requirement makes it possible for students to evade the spirit of the various requirements, even while fulfilling them to the letter.

Our goal in crafting this proposed general education curriculum, therefore, has been to reduce the number of requirements, to simplify them, and to focus them primarily on the areas of general education where we have learned that students generally will not venture if left to their own devices. Thus, we have decreased emphasis on the idea that the requirements should somehow represent “everything that every College student ought to know or do,” and have focused more on the essential parts of general education that College students might overlook or avoid.

Thus, the requirements stress core competencies (writing, data analysis, formal reasoning, foreign language study, global cultural analysis) and breadth in the spirit of engagement with a variety of disciplinary approaches and with issues that cut across disciplines. This is accomplished via two types of requirements: the sector requirements and the skills and methods requirements. The former replace the current General Requirement of ten courses in seven sectors with a requirement of seven courses, one from each of seven sectors; these are explained below in section III.B. The latter are adaptations of the current set of skills and methods requirements and are explained in section III.C.

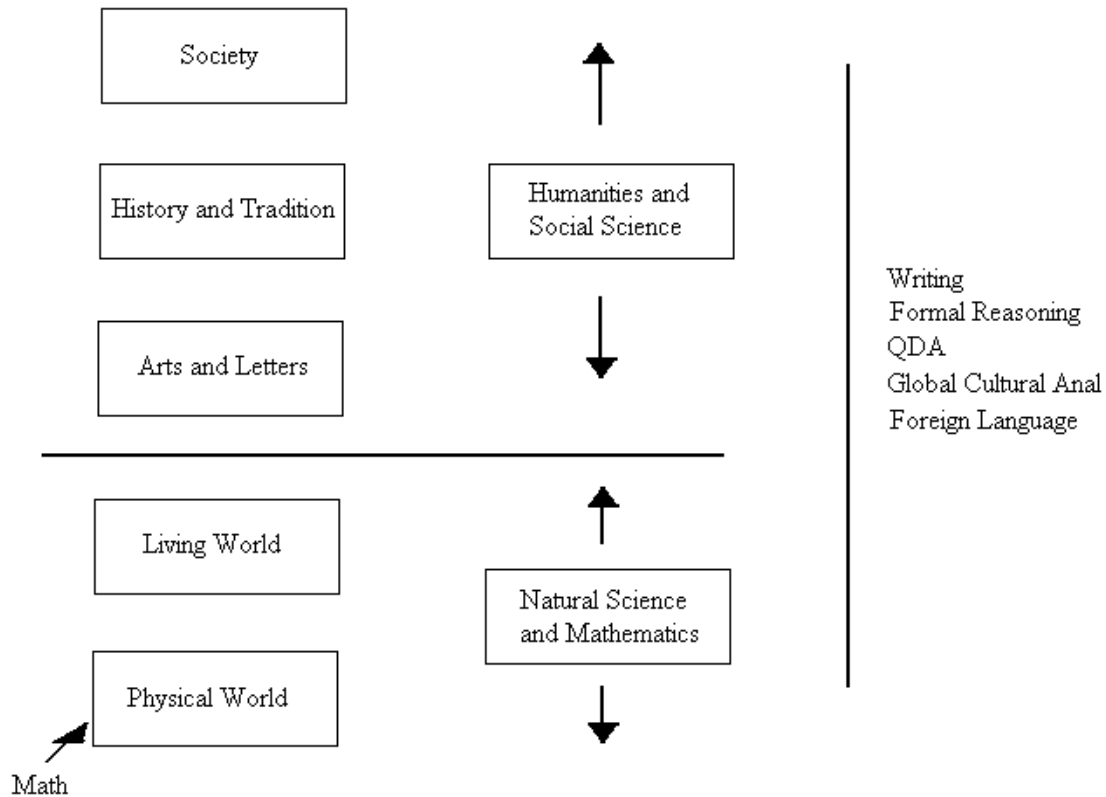
### **III.B. The Sector Requirements**

To help students to gain an appreciation of the range of knowledge and diversity of approaches in the arts and sciences, the proposed general education curriculum requires students to take seven courses that span the humanities, social sciences and natural sciences. This requirement is designed to ensure the breadth of knowledge essential to the educated inhabitant of a complex world. It is also designed to expose students to the variety of disciplines and approaches to knowledge pursued in the modern university early enough in their courses of study to help them make informed choices about their majors and the rest of their studies.

Five of these courses are to be based in sectors that reflect the faculty's collective judgment about a useful and informative way to organize the great variety of humankind's intellectual and social accomplishments to the present time and the many ways in which human beings interact with their ever-expanding environment. The classification of these courses thus cuts across departmental lines in many cases, reflecting the complexity of knowledge in the modern world.

The sixth and seventh courses in this part of the general education requirement provide an opportunity for students either to explore an area outside their major in greater depth, to

expand further their exploration of the range of approaches to knowledge represented in the arts and sciences, or to engage in interdisciplinary courses in which approaches from several disciplines in the humanities, social sciences and natural sciences will be introduced, and the perspectives of diverse cultures will be considered.



Each sector description that follows includes a series of questions designed to guide faculty seeking to develop courses for approval and to assist the Committee on the Sector Requirements in evaluating the courses that are presented to it. The questions reflect a student-centered pedagogy that focuses on intellectual competencies that students might be expected to gain by taking a course in a specific sector. They are guidelines only and are not meant to exhaust the possibilities in each category, nor are courses expected to meet all or even a majority of these guidelines in order to gain acceptance into a sector.

Appended to this proposal are *provisional* lists of courses for each of the sectors. These are meant to be illustrative and are not included in what the faculty is being asked to approve at this time. Rather, they constitute the starting point for deliberations of a new Committee on the Sector Requirements, which will review these lists and other courses recommended by departments and programs in order to construct the initial set of sector lists to be presented to the College class entering in 2006. These lists will then be subject to revision as requested by departments and programs or as decided by the Committee on

the Sector Requirements based on a schedule of regular periodic review of all courses in the sectors. See section V. B. below for a fuller account of this process.

[Note: Italicized questions pertaining to the following seven sectors were not included in the faculty vote; the questions will be reformulated and reported back to the faculty in the fall of 2005.]

### III.B.1. Sector I: Society

This sector focuses on the structure and organizing principles norms of contemporary human societies, including their psychological and cultural dimensions.

Courses in this sector use many analytical techniques that have been developed to study contemporary society, with its complex relations between individuals and larger forms of mass participation. Some Society courses are largely devoted to the analysis of aggregate forms of human behavior (encounters, markets, civil society, nations, supranational organizations, and so on), while others may focus on the relations between individuals and their various societies. While historical materials may be studied, the primary objective of Society courses is to enable students to develop concepts and principles, test theories and perfect tools that can be used to interpret, explain and evaluate the behavior of human beings in contemporary societies. This objective will be realized in relation to the specific content of the various courses, but the emphasis in each course should be on developing in students a general capacity for social analysis and understanding.

1. *Does this course allow students to formulate and test social science hypotheses?*
2. *Does the course provide students with an understanding of social theories?*
3. *Will students understand the basis of empirical social science?*
4. *Will students gather and interpret data about social phenomena?*
5. *Does the course encourage students' understanding of culture, class, gender, race, or other fundamental social constructs?*

### III.B.2. Sector II: History and Tradition

This sector focuses on studies of continuity and change in human thought, belief and action.

Understanding both ancient and modern civilizations provides students with an essential perspective on contemporary life. Courses in this sector examine the histories of diverse civilizations, their cultures and forms of expression, their formal and informal belief systems and ideologies, and the record of their human actors. Students should learn to interpret primary sources, to identify and discuss their core intellectual issues, to understand the social contexts in which these sources were created, to pose questions about their validity and ability to represent broader perspectives, and to write persuasive essays about them.

1. *Does this course allow students to read and interpret primary sources?*
2. *Will students be able to contextualize the primary materials they examine?*
3. *Will students closely read materials and discuss their core ideas?*
4. *Will students learn to interpret visual or material objects?*
5. *Do students have the opportunity to write interpretive essays about the sources they study?*
6. *Does the course provide students with an interpretive framework for analyzing change over time?*

### III.B.3. Sector III: Arts and Letters

This sector encompasses the means and meaning of visual arts, literature and music, together with the criticism surrounding them.

Most courses in this sector are concerned with works of creativity—paintings, films, poetry, fiction, theatre, dance and music. They generally address a considerable breadth of material rather than an individual work or artist. The objective of Arts and Letters courses is to confront students with works of creativity; cultivate their powers of perception (visual, textual, auditory); and equip them with tools for analysis, interpretation, and criticism. This objective will be realized in relation to the specific content of the various courses, but the emphasis in each course should be on developing and strengthening in students a general capacity for understanding meaning and the ways in which it is achieved in its distinctive environment of culture and moment.

1. *Does the course allow students to develop interpretive strategies for analyzing visual, aural or literary texts?*
2. *Does the course offer students ample opportunity to write interpretive essays?*

### III.B.4. Sector IV: The Living World

This sector deals substantively with the evolution, development, structure and/or function of living systems.

Courses in this sector study the variety of approaches that are useful in understanding living organisms, ranging from analyses at the molecular and cellular level to analyses of evolution and adaptation to environments. Students learn the methods used by contemporary natural science to study these topics, including ways in which hypotheses are developed, tested, and reformulated in light of ever-increasing research findings. A full understanding of living organisms incorporates insights from approaches at many different levels.

1. *Does the course allow students the opportunity to gather data and develop and test hypotheses about the organization or functioning of living systems?*

2. *Can students verify empirical observations or replicate the observational studies of other researchers?*

### III.B.5. Sector V: The Physical World

This sector focuses on the methodology and concepts of physical science.

Courses in this sector aim to provide insight into the content and workings of modern physical science. Some courses in this sector are part of a major, while others are designed primarily to provide an introduction to their field for non-science majors. Courses for non-science majors may include some discussion of the historical development of the subject as well as the most important conceptual notions and their mathematical expressions. All courses in this sector seek to demonstrate the generally accepted paradigm of modern science: experiment and observation suggest mathematically formulated theories, which are then tested by comparison with new experiments and observations.

All courses in this sector shall have and use a significant mathematical prerequisite (serious high school algebra through an introduction to calculus), that is, students will actually be expected to use mathematical methods and concepts to achieve an understanding of the subjects they concern.

1. *Does the course have students use mathematical methods to test observational data and formulate and test hypotheses?*

### III.B.6. Sector VI: The Humanities and Social Sciences

Students should engage with diverse approaches to society, history, tradition and the arts more deeply than a single course from each domain can allow. Greater depth of experience can be accomplished either by greater focus on one area, by study in a related area, by bringing to bear the various humanistic and social perspectives upon a single issue or topic, or by engaging directly in academically-based activities informed by these perspectives.

In this sector, students may pursue further exposure to a discipline in sector I, II or III by taking an additional course therein or seek to broaden their perspective by taking a course in the humanities or social sciences that has been approved as a general education course but that cuts across two or more of the three sectors. Other courses approved for this sector will seek a more integrative approach by addressing a problem or topic from a variety of disciplinary perspectives in the manner of Pilot Curriculum courses. Still others will combine disciplinary study with community service or activism, and constructively and reflectively connect the theoretical with the actual. Finally, courses in the arts that combine creative or performance experience with reflection and grounding within a discipline will be approved for this sector.

1. *Does the course integrate theory with practical applications?*
2. *Are students allowed the opportunity to reflect on practice?*
3. *Does the course allow students to integrate approaches from two or more humanities or social science disciplines?*
4. *Does the course place creative practice in writing, music or the fine arts in an interpretive context?*

### III.B.7. Sector VII: The Natural Sciences and Mathematics

Similarly, students should engage with the diverse approaches to the natural sciences and mathematics more deeply than a single course from the physical and life sciences would allow. Greater depth of experience can be accomplished either by greater focus on one area, by study in a related area, by bringing to bear various scientific perspectives upon a single issue or topic, or by engaging directly in academically-based activities informed by these perspectives.

In this sector, students may pursue further exposure to a discipline in sector IV or V by taking an additional course therein, or seek to broaden their perspective by taking a course in the natural sciences or mathematics that has been approved as a general education course but that cuts across the two sectors. Other courses approved for this sector will seek a more integrative approach by addressing a problem or topic from a variety of disciplinary perspectives in the manner of Pilot Curriculum courses. Still others will combine disciplinary study with community service or activism, and constructively and reflectively connect the theoretical with the actual.

1. *Does this course integrate knowledge across two or more disciplines in the natural sciences/mathematics?*
2. *Does the course integrate theory with practice?*

It is conceivable that an interdisciplinary or academically-based community service course might span an area or areas contained in sectors I, II and III as well as one or more parts of sectors IV and V (for example a course that focuses on the mathematics and physics of music). Such a course could be approved for both sectors VI and VII, and could be used by a student to satisfy either (but not both) sectors.

#### Some Rules Regarding Substitution and Double-Counting for the Sector Requirements

None of these requirements may be satisfied by advanced placement credit, pre-college credit, or credit away. Transfer credit (i.e., Penn credit awarded to transfer students) may be applied to the sector requirements without restriction under the following circumstance: the relevant department must certify that the course is equivalent to a course listed in a sector and assign it the corresponding number.

Students whose majors include coursework in both the Living World and the Physical World sectors will be permitted to double-count one course toward the major and the Living World requirement and one course toward the major and the Physical World requirement. Students in other majors will be allowed to count no more than one course toward both the major and a sector requirement. Students with more than one major will be allowed to double-count one course for each major. Allowing unlimited double-counting can result in an education that does not extend sufficiently beyond the methods and content of the major. Forbidding the double-counting of courses, however, denies the role a general education course can play in inspiring a student to consider a major that was otherwise unknown or unfamiliar to him or her.

### **III.C. Skills and Methods Requirements**

#### III.C.1. Writing and Communication

Our writing requirement and program, developed by the College's Center for Programs in Contemporary Writing, has been standardized for all four undergraduate schools. The new curriculum will require that College students complete a writing seminar within their first two years and will encourage students to pursue further training in writing. Students should also develop oral communication skills through CWiC -- the Communication Within the Curriculum program. CWiC's programs will be enhanced by their presence in the College Information Commons, a technologically and programmatically enhanced student workspace that will open in the library next year.

#### III.C.2. Language

The faculty of Arts and Sciences considers competence in a foreign language essential for an educated person. Participation in the global community is predicated on the ability to understand and appreciate cultural difference, and nothing brings this more sharply into focus than the experience of learning a foreign language. The foreign language not only affords unique access to a different culture and its ways of life and thought; it also increases awareness of one's own language and culture. The new general education requirement will include the foreign language requirement in its current form (but see section V.E below).

#### III.C.3. Quantitative Data Analysis

In contemporary society, citizenship, work and personal decision-making all require sophisticated thinking about quantitative evidence. To ensure that graduates of the College are equipped with appropriate skills, we require our students to complete a course which uses mathematical or statistical analysis of quantitative data as an important method for understanding another subject. In these Quantitative Data Analysis courses,

students will learn to think critically about quantitative data and the inferences that can be drawn from these data. Students will gain experience with the use of quantitative analysis to interpret empirical data and to test hypotheses. The course taken to fulfill this requirement may also be used to fulfill a sector or a major requirement.

#### III.C.4. Formal Reasoning and Analysis

Courses that fulfill this requirement concern the formal structure of human thought, including its linguistic, logical and mathematical constituents. The courses emphasize mathematical and logical thinking, including quantitative reasoning and reasoning about formal structures and their application to the investigation of real world phenomena. Students complete this requirement by taking one course from a designated list. In addition to courses in mathematics, the list includes courses in computer science, formal linguistics, and symbolic logic. The course taken to fulfill this requirement may also be used to fulfill a sector or a major requirement.

The general requirement in the current College curriculum was innovative in drawing together courses in mathematics, computer science, logic, formal linguistics, and statistics that concern the most formal aspects of thought and formulating a Formal Reasoning and Analysis sector requirement. The present proposal departs slightly from that scheme in conceiving this component of the curriculum not as a discrete sector of knowledge but rather as an approach to knowledge that pertains to the intellectual work that goes on in the other sectors. As such, it is similar to the Quantitative Data Analysis component. Indeed, the current curriculum often causes confusion about the distinction between formal reasoning and analysis on the one hand and quantitative data analysis on the other; students and faculty alike often wonder why, for instance, a course in calculus does not satisfy the Quantitative Data Analysis requirement. The Formal Reasoning and Analysis Requirement as constituted for the proposed curriculum is clustered with the other skills and methods requirements. In addition, it is defined around formal, deductive approaches. Courses that concern inductive approaches such as those studied in statistics have been removed from the Formal Reasoning and Analysis list but continue to play a central role in the Quantitative Data Analysis component of the curriculum.

A list of courses designated provisionally for the Formal Reasoning and Analysis requirement can be found at the end of the provisional sector lists.

#### III.C.5. Global Cultural Analysis [Note: This section is to be clarified by the Committee on Undergraduate Education in fall of 2005.]

Graduates of the College should gain experience exploring a culture outside the immediate context in which the University of Pennsylvania was founded and developed. Global Cultural Analysis courses seek to provide students with tools for understanding the cultural practices, social systems, politics, economics, history, traditions, arts, or literatures of one or more peoples geographically removed from inhabitants of the

contemporary United States. They encourage critical and responsible attention to issues of identity, diversity, globalization, and power so that students may approach issues and problems from multiple perspectives. Such experience can be gained in the course of fulfilling Sectors I, II, III and VI or through elective or major-related coursework. Students complete this requirement by taking one course from a designated list, which may be counted also toward a sector requirement and/or the major.

A list of courses designated provisionally for the Global Cultural Analysis requirement can be found at the end of the provisional sector lists. This list was generated from the current General Requirement sector lists. It will be supplemented by upper-level courses with global cultural content that are not part of the current General Requirement.

### **III.D. Other Important Elements of an Arts and Sciences Education**

In the course of its deliberations on the general education curriculum, the Committee on Undergraduate Education considered the possibility of introducing several other requirements. Three in particular are regarded as important aspects of a thorough education in the arts and sciences. While the committee is not proposing these as additional requirements, we encourage all students to address them in the course of their undergraduate experience, and we encourage all advisors to stress their importance and encourage their students to engage in courses and activities pertaining to them.

#### **III.D.1. Learning About and Engaging in Research**

The University of Pennsylvania is a research institution. One of the most valuable things the College has to offer its students is the opportunity to work with Penn's world-renowned faculty on a research project that is either closely supervised or somewhat more independent. The Pilot Curriculum required all of its students to complete a research project and, partially as a result of the influence of the Pilot experiment, a great many College students report having engaged in research during their undergraduate careers. In the most recent survey, more than 80% of students graduating from the College reported having done a research project, and more than 70% (that is, about 7 out of 8 of the students who engaged in research) reported that the research experience was either an important or an essential part of their academic experience in the College.

Although we have chosen not to impose a research requirement on all students, we note that many departments and programs do impose such requirements on their majors, and we encourage faculty to provide and students to take advantage of opportunities to do research as undergraduates.

Many disciplines, particularly in the social sciences, offer research methodology courses that prepare students to use and interpret original sources and data sets. We recommend that faculty advise students to take such courses before their senior year so that they are appropriately prepared to take advantage of undergraduate research opportunities.

### III.D.2. Community Engagement

As an urban university, Penn presents its students with a broad range of opportunities to connect with the community. Academically-Based Community Service courses, many of which are based in the College in collaboration with the Center for Community Partnerships, are a means of combining community engagement with rigorous academic work. While we do not intend to impose a community service requirement as part of general education in the College, we will encourage development of ABCS courses and other courses that combine academic work with practical experience in the community, courses that could satisfy sector VI or VII.

### III.D.3. Moral Reasoning

Questions of human values, notions of “right” versus “wrong,” and competing conceptions of morality are of paramount importance in our increasingly complex world. Although we have chosen not to impose a specific course requirement in ethical reasoning, we recognize our responsibility to educate morally responsible leaders and citizens. We encourage faculty and departments to incorporate an appropriate range of ethical questions and case studies into their courses and majors.

### III.E. Electives and Total Course Units Required for Graduation

In addition to courses taken in the major and in the general education components of the curriculum, students must take a number of free electives according to rules currently in effect for the College. *Electives* are defined as all courses taken outside a student’s *primary* major. *Free electives* are elective courses taken in addition to those that fulfill general education requirements. Students must take enough free electives (that is, courses in addition to major and general education requirements) to yield a total of 32 to 36 total course units depending on the course units required in the major.

Students are normally required to take at least 20 elective course units. In no case, however, will a student with a single major and a single degree be required to take more than a total of 36 course units (i.e., 16 course units in the major plus 20 elective course units), provided these are distributed correctly across major and general education requirements. Students whose majors requiring in excess of 16 course units will be granted a decrease in the number of electives corresponding to this excess.

Because the College awards the Bachelor of Arts degree, at least 16 of these 20 electives must be in arts and sciences subjects. (Any course from another school in the University that is approved for one of the sector requirements is considered to be in an arts and sciences subject.) Students may take more than 16 electives in arts and sciences subjects. They may also take more than 4 electives in courses from other schools provided they

take the 16 arts and sciences electives. When the elective requirement is decreased because major requirements exceed 16 course units, the decrease will be applied first to the 4 electives taken in addition to the 16 required in arts and sciences subjects.

#### **IV. Advising**

To help students navigate the new curriculum and to craft a coherent course of study most suited to their individual needs, we are devising enhancements to the pre-major advising system, as well as advising for transition to the major. Because the proposed curriculum has fewer requirements and relies in an explicit way on advising to achieve some of its aims, the role of faculty advisors, Assistant Deans for Advising, and peer advisors will become all the more important.

An element of the Pilot Curriculum that students and advisors find useful (although some students complained about having to do it) was the “Academic Plan”. This is completed during the sophomore year, usually as the student is contemplating the selection of a major. While we find the idea of the Academic Plan compelling, we are proposing an altered version of it for inclusion in the new curriculum, called the “Academic Blog”. [The Academic Blog will be pilot-tested in 2005-2006 before the decision to implement it for incoming students in fall of 2006.](#)

Advising begins before freshman year, as entering students prepare for their first semester at Penn. The array of courses and majors in the College is daunting, and students need guidance right from the start in picking courses appropriate to their interests as well as encouragement to experiment in new areas. It is just as important that advising be consistent and ongoing, both for encouraging further progress, the completion of requirements, and selection and completion of a major and also for the detection and prevention of academic problems.

Every semester, including the summer before the freshman year, before registration for classes, each student should add a few paragraphs to his or her Academic Blog – this will be a narrative planning document and journal, kept on-line, for the student and his or her advisor to review each semester. Prompted by a few advising questions each semester, the student will write informally and discursively concerning his or her choice of courses, prospective majors (or disciplines eliminated as potential majors), plans for research or study abroad, how requirements are being filled, and any other academic concerns the student may have.

Before each semester’s meeting between advisor and student at registration time, the student will add a few paragraphs to the blog so that the advisor can read the updated blog in order that the subsequent conversation can be focused on critical aspects of the student’s intellectual and academic development, rather than on housekeeping details. The blog should also be useful during the “hand-off” from pre-major advising to advising within the student’s major. Finally, the students themselves might find it interesting to be

able to look back to compare their pre-freshman expectations with their aspirations several semesters later.

## **V. Oversight and Questions for the Future**

General education courses should support breadth in a student's education and should make an explicit attempt to expose students to modes of inquiry and the ways of interpreting and creating knowledge that are embodied in different disciplines. These courses should be broad, not necessarily as introductions to bodies of knowledge or in the amount of material they cover, but primarily in the questions they open up for students, in the understanding of inquiry in one or more disciplines that they foster, and in the suggestion of areas for additional study that students may pursue. General education courses should inspire students to pursue intellectually rigorous undergraduate careers and to avoid paths of least resistance. Ideally, general education should also stimulate a sense of community and intellectual discourse among students by presenting them with issues, both classic and modern, in which they can engage with one another both in and out of the classroom. Students can then build upon their general education courses both in terms of finding a specific area of study (the major) and in pursuing other interests with their electives.

### **V.A. Ongoing: How Do Students Satisfy Requirements? (Committee on Undergraduate Education)**

The design of the general education curriculum has been informed by a consultative process that sought to understand and instantiate the views of the faculty and students of the College concerning the most important features of arts and sciences education. The design also takes into account the data from the Pilot Curriculum experiment and other data collected over the course of many years that indicate how the stated requirements interact with the actual set of courses being offered by the faculty and the inclinations of students as expressed through their selection of required and elective courses. It is this interaction that produces the actual general education curriculum of the College.

Once the new general education requirements are enacted, the Committee on Undergraduate Education will be charged with monitoring the patterns of course selection among the students, both to ensure that the new requirements are effective in achieving the goals set forth for them, and to detect unintended consequences either of requirements or the lack thereof in various areas. Two questions to consider immediately will concern the effects of the reduction in the number of required humanities and social science courses and the elimination of the formal reasoning and analysis requirement.

## V.B. Courses in the Sectors (Committee on the Sector Requirements)

The sector lists for the current General Requirement and the lists of courses developed for the Pilot Curriculum have been used to generate provisional sector lists for the proposed curriculum. All of the courses in the existing sectors, with the exception of courses that have not enrolled at least 40 College students over the past four academic years, have been reassigned to the new sectors. The resulting provisional sector lists will be submitted for ratification by a Committee on the Sector Requirements, which will replace the two existing committees that oversee the General Requirement for the regular and pilot curricula.

In addition, the Committee on the Sector Requirements will oversee the process of admitting new courses to the various sectors as well as the periodic review of the sectors, as described below.

The existing Quantitative Data Analysis Education Committee will be renamed the Committee on Instruction in Quantitative and Formal Reasoning and will oversee the Quantitative Data Analysis and Formal Reasoning and Analysis components of the curriculum.

### V.B.1. Criteria for Admission of Additional Courses

The primary goal of a general education course is to provide an intellectual experience that is both substantial and self-standing. The course should be ‘substantial’ in the usual sense (rigorous, demanding, etc.). In addition, the course is best designed as a ‘self-standing’ exposure to a topic, or area, or field of knowledge, not as a prequel to more specialized coursework in a discipline. Successful general education courses may well draw students into a major; but this should be viewed as incidental to the goals of the course.

One practice of the Pilot Curriculum that should be preserved is the way in which new courses are presented for approval. The committee entrusted with oversight of general education cannot fulfill its mission simply by passing summary judgments on course proposals that they receive in writing. Instead, faculty proposing new general education courses should discuss their plans with the committee overseeing the general education curriculum early in the process. Once a proposal is prepared, its review should take the form of a conversation among the proposers and the committee members in which all parties consider together the goals of general education and the ways in which the proposed course addresses those goals. What is important in this transaction is not only the application of criteria to a proposed course but rather-also a meeting of minds through which faculty work together to define general education both as an abstract concept and as the particular set of ideas and practices involved in the teaching of the proposed course.

## V.B.2. Monitoring and Periodic Review of Sector Courses

General education courses should come up for re-evaluation at least once every five years. In any given year some courses will normally be taken off the general education roster and others added. In pursuing the re-evaluation, the committee should consider issues such as

- (a) Does the course meet our goals for general education?
- (b) Is the course offered on a regular basis?
- (c) Is the instructor a member of the standing faculty?

Another measure of effectiveness is the extent to which a course is actually used by students to fulfill the appropriate sector requirement. We anticipate that the number of courses in each sector will be kept relatively constant and small (keeping in mind that, on average, about 1500 students per year need to satisfy each sector), so that the re-evaluation of courses should be pursued vigorously.

When the curriculum is enacted, we will have to populate each sector with courses. Each course will be assigned a re-evaluation date, evenly distributed over the subsequent five years, so that the committee's workload remains relatively constant and manageable.

## V.C. Resources for Development (College)

The College will encourage the development of effective general education courses, in particular science courses for non-majors in sectors IV and V, and interdisciplinary or problem-based courses in sectors VI and VII, by providing resources for faculty who wish to design and implement these courses.

## V.D. Advising (College)

The College will also monitor the effectiveness of the deployment of human resources (Assistant Deans for Advising, Faculty Advisors, Peer Advisors) in regards to pre-freshman and pre-major advising, the transition from pre-major to major advising, and advising in the various majors. Particular emphasis will be placed on evaluating the effectiveness of the proposed academic blogs.

## V.E. "Enhanced" Language Requirement (ad hoc committee)

An issue that has remained unresolved in our deliberations about the general education curriculum concerns students who enter Penn having already fulfilled their Foreign Language requirement. One proposal would require such a student to take a further course in a language (either more advanced study of the language or a course about literature or culture taught in the language), begin study of a new language, or study

language in general (linguistics). We propose that a task force be commissioned to study this question.