

SPECIAL SENATE COMMITTEE ON IMPLEMENTATION OF
THE GENERAL EDUCATION REFORM

Implementation of the New Integrative Studies Requirement in General Education

(Legislative)

Implementation: Upon Approval by the Senate

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Introduction

In its meeting on April 28, 2015, the University Faculty Senate approved a legislative report (<http://senate.psu.edu/senators/agendas-records/april-28-2015-agenda/appendix-b/>) that included, as its Recommendation 6, a new General Education requirement for Integrative Studies:

(a) Require 6 credits of Integrative Studies as part of the General Education Baccalaureate requirements; (b) create inter-domain courses as a way for students to accomplish the Integrative Studies requirement; (c) create linked courses as a way to offer the Integrative component; (d) replace the “9-6-3” substitution with the more flexible “Move 3” substitution; and (e) allow an Integrative Studies course to satisfy the flexible 3 credits of exploration within the Associate Degree General Education curriculum.

That section of the April 2015 legislative report specified the number of Integrative Studies credits required for Baccalaureate degrees (6 credits) and allowed for Associate degrees (3 credits), and stated that inter-domain courses and linked courses should form two ways to meet that requirement.

In June 2015, Senate Chair Mohamad Ansari appointed a Special Senate Committee on Implementation of the General Education Reform. The full charge to this committee is included as **Attachment 1**. Key aspects of the charge include:

The Special Senate Committee on Implementation of the General Education Reform is being appointed and is charged with the design of a clear and unambiguous process by which Recommendation 6 [of the April 2015 Senate legislative report on General Education] is to be implemented. More specifically, the Special Committee is charged to:

- Develop an implementation plan for inter-domain courses, and propose a process of consultation, including approval criteria that ensure academic rigor and distribution across domains in the design and staffing of these courses;
- Develop an implementation plan for linked courses, and propose a process of consultation, including approval criteria that ensure academic rigor and distribution across domains in the design and staffing of these courses;
- Consider, if the Special Senate Committee chooses to, the Topics for Further Consideration as stated in Part III of the April 28, 2015 Legislative Report from the General Education Planning and Oversight Task Force. If such topics are considered, then the Special Committee will bring related Legislative Reports to the University Faculty Senate for its consideration and approval;
- Consult and maintain liaison with the University Faculty Senate Standing Committees on Curricular Affairs and Undergraduate Education; and
- Forward reports, prior to submission to the Senate Council, to the University Faculty Senate Standing Committees on Curricular Affairs and Undergraduate Education for consultation.

The Senate Special Committee on Implementation of the General Education Reform will be expected to present its work as follows:

- Prepare Legislative Report(s) for the University Faculty Senate Plenary meeting of December 8, 2015, January 26, 2016, or March 15, 2016

In accordance with Chair Ansari's charge, the Implementation Committee has met regularly since June 2015. Our process has included a Forensic Report to the Senate on January 26, 2016 (<http://senate.psu.edu/senators/agendas-records/january-26-2016-agenda/appendix-b/>) and consultations with constituencies within and beyond the Senate. For a list of consultation meetings held by the Implementation Committee's chair, see **Attachment 2**.

Part I. Proposal to Update the Descriptions of the Foundations (formerly Skills) and Knowledge Domains of General Education: Recommendation 1

Updating the descriptions of the Foundations (Writing and Speaking, GWS; and Quantification, GQ) and the Knowledge Domains of General Education (Arts, GA; Humanities, GH; Health and Wellness, GHW; Natural Sciences, GN; and Social and Behavioral Sciences, GS) is an important step towards establishing criteria for the new Integrative Studies category that will reach across the individual Knowledge Domains. Our process included a survey, sent in October 2015 to all Senators, full-time faculty members (tenure-track and non-tenure-track) at all locations who have taught General Education during the past three years, and key administrative leaders (such as department heads) to invite broad input on proposed revisions to the descriptions of the Foundations and Knowledge Domains. The survey and a summary of the responses are available on the Senate website (<http://senate.psu.edu/gened-survey-results/>).

As is shown in **Attachment 3**, survey responses showed an overwhelming approval of the draft updates. Summing the data across all questions, 96% of the replies approved of the proposed Foundation and Knowledge Domain revisions, either as-is or with suggested changes in wording. For GWS, for example, 165 out of 218 respondents to one question indicated "keep as worded," while another 49 indicated "keep, with rewording." Further numerical data is provided on the Senate website (URL listed above) showing the data in response to each of the criteria as then written. In addition, the survey showed strong support for requiring courses to target three of the Student Learning Criteria in any category (rather than just one criterion, on the one hand, or all the criteria, on the other). The Special Committee also gave serious consideration to the written comments received in response to the survey. Both survey input and other input have been reflected in the proposed wording shown below.

The proposed updated version appears below; a side-by-side layout of the current (existing) and proposed descriptions is provided in **Attachment 4**.

Recommendation 1. The Senate endorses the updated descriptions and criteria for the Foundations and the Knowledge Domains of General Education that are shown below. To receive approval for a General Education Foundations category or a Knowledge Domain, courses will address at least three of the Student Learning Criteria identified in the appropriate section below.

Foundations

Writing/ Speaking (GWS)

In Writing and Speaking (GWS) courses, students do more than improve their abilities to communicate information clearly. They learn to set forth arguments persuasively and well, both orally and in writing. Students should emerge from their GWS courses as more accomplished writers and speakers, competent in a wide variety of settings.

To help students achieve GWS goals, the university provides GWS courses and an appropriate learning environment that will:

- Provide opportunities for students to become increasingly effective communicators as they enter new contexts and address new audiences
- Provide opportunities for students to become increasingly accomplished in written, oral, digital, and visual communication.

GWS Student Learning Criteria. Upon successful completion of the General Education Writing and Speaking requirements, students will have increased their abilities to:

- Demonstrate rhetorical and analytical skills as they explore, compose, interpret, and present a variety of texts
- Communicate effectively and persuasively to a range of audiences
- Demonstrate capacities for critical thinking, listening, and generating ideas
- Demonstrate proficiency in composing processes
- Employ the conventions of both spoken and written communication with sensitivity to context and venue.

Quantification (GQ)

In Quantification (GQ) fields, students practice and master basic mathematical and statistical skills of lifelong value in solving real world problems. Students should learn to apply mathematical skills appropriate to solve such problems.

To help students achieve GQ goals and master foundational quantification skills, the university provides GQ coursework and an appropriate learning environment that will:

- Provide experience in assessing and interpreting quantitative data and information
- Guide students to recognize patterns, establish relations, exercise conceptual thinking, develop problem-solving skills, and think logically and critically
- Provide students with opportunities to determine probabilities
- Support students in their efforts to draw accurate and useful conclusions; make informed decisions based on quantitative analysis; and use basic mathematical and statistical skills to solve conceptual problems.

GQ Student Learning Criteria. Upon successful completion of the General Education Quantification (GQ) requirement, students should have increased their abilities to:

- Use mathematical, statistical, or computational models, principles, and processes to integrate, synthesize, generalize, or make judgments about real world problems
- Recognize patterns, establish mathematical relations, apply problem-solving skills, and think logically and critically
- Develop, explore, analyze, and reason about multi-variable relationships using quantitative tools
- Use probability to reason and make judgments based on data that exhibit variability
- Communicate and explain mathematical and statistical ideas.

Knowledge Domains

Arts (GA)

In Arts fields (GA), students focus on exploring or creating works of art. Students should become familiar with the importance of significant creative works, the traditions and history associated with those works, and the important role that the arts play as expressions of the cultural values of society and the human condition.

To help students achieve GA goals, the University provides GA courses and an appropriate learning environment with purposeful engagement with the arts and creative works for students to:

- Encounter and become conversant with the terminologies, techniques, practices, knowledge, and skills employed by the arts
- Gain a comprehension of the role that the arts play as expressions of the cultural values of society and the human condition
- Expand their knowledge of the variety of expressions and experiences that are provided through the arts
- Develop competencies in interpreting and critically evaluating diverse expressions in the arts.

GA Student Learning Criteria. Upon successful completion of the General Education Arts (GA) requirement, students should be able to:

- Explain the methods of inquiry in arts fields and describe how the contributions of these fields complement inquiry in other areas
- Demonstrate an expanded knowledge and comprehension of the role that the arts play in various aspects of human endeavor
- Demonstrate competence in the creation of works of art and design
- Demonstrate competence in analysis, critical thinking and interpretive reasoning through the exploration of creative works
- Identify and explain the aesthetic, historic, social, and cultural significance of important works of art and critically assess creative works, their own or others', through evaluative processes of analysis and interpretation.

Humanities (GH)

In Humanities (GH) fields, students focus on exploring important works of literature, history, religion, philosophy, and other closely related forms of cultural expression, thereby broadening their understanding of diverse ways of seeing, thinking about, and experiencing the self and society. Students will enlarge their intellectual horizons and knowledge of the world through encountering humanistic representations of both lived experiences and imaginative or speculative constructions, past or present. Students thus become increasingly prepared to live as thoughtfully engaged members of multiple communities, whether local, regional, or global.

To help students achieve GH goals, the University provides GH courses and an appropriate learning environment for students to:

- Engage in the qualitative study of the humanities
- Expand their knowledge of the variety of human experiences
- Gain access to various intellectual traditions and their changes through time

- Probe the foundations of communication and thought and become aware of the scope and limitations of human communication
- Encounter concepts and traditions that attempt to bring sense to human existence
- Develop their competency in interpreting and critically evaluating diverse ways of life, traditions, and shared or individual values, including their own.

GH Student Learning Criteria. Upon successful completion of the General Education Humanities (GH) requirement, students should have increased their abilities to:

- Explain the methods of inquiry in humanities fields and describe how the contributions of these fields complement inquiry in other areas
- Demonstrate competence in critical thinking about topics and texts in the humanities through clear and well-reasoned responses
- Critically evaluate texts in the humanities— whether verbal, visual, or digital— and identify and explain moral or ethical dimensions within the disciplines of the humanities
- Demonstrate knowledge of major cultural currents, issues, and developments through time, including evidence of exposure to unfamiliar material that challenges their curiosity and stretches their intellectual range
- Become familiar with groups, individuals, ideas, or events that have influenced the experiences and values of different communities.

Health and Wellness (GHW)

In Health and Wellness (GHW) fields, students focus on the physical and psychosocial well-being of individuals and communities. They expand their theoretical and practical knowledge about health and wellness—concepts that are multidimensional and culturally defined. The University provides opportunities for students to study such diverse topics as nutrition, physical activity, stress, sleep, healthy leisure, alcohol, tobacco, and other substance use, sexual health, and safety—all useful in maintaining lifelong health and wellness and in creating healthy work and community environments.

To help students achieve GHW goals, the University provides GHW courses and an appropriate learning environment for students to:

- Identify and practice skills, attitudes, and behaviors that should enable them to better maintain health and wellness across their lifespans
- Identify wellness as a positive state of well-being, not merely the absence of disease or illness
- Recognize the importance of social, emotional, and physical health and wellness for communities as well as for individuals.

GHW Student Learning Criteria. Upon successful completion of the General Education Health and Wellness (GHW) requirement, students should have increased their abilities to:

- Explain the methods of inquiry in Health and Wellness fields and describe how the contributions of these fields complement inquiry in other areas
- Describe multiple perceptions and dimensions of health and wellness (emotional, spiritual, environmental, physical, social, intellectual, and occupational)
- Identify and explain ways individuals and/or communities can achieve and maintain health and wellness

- Describe health-related risk factors and explain changes in knowledge, attitudes, behaviors, activities or skills that have the potential of improving health and wellness
- Disseminate knowledge about health and wellness and demonstrate behavioral practices needed to engage in healthy living across the life span.

Natural Sciences (GN)

In Natural Science (GN) fields, students develop the skills necessary to make informed judgments about scientific information and arguments. Along with building knowledge of foundational scientific principles, students expand their understanding of how and why science works, why it is an effective tool for knowledge generation, and how it can address contemporary questions and challenges.

To help students achieve GN goals and develop this scientific literacy, the University provides GN courses and an appropriate learning environment for students to:

- Encounter the order, diversity, and beauty of nature
- Sample some of the ways in which science offers an additional lens through which to view the human condition
- Engage with scientific material through discussion, exploration, data analysis, and experimentation
- Gain practice in recognizing the nature of scientific process and discovery, in identifying what science can and cannot achieve, and in analyzing why scientific arguments may lead to different conclusions than other forms of intellectual discourse.

GN Student Learning Criteria. Upon successful completion of the General Education (GN) requirement, students should have increased their abilities to:

- Explain the methods of inquiry in the natural science fields and describe how the contributions of these fields complement inquiry in other areas
- Construct evidence-based explanations of natural phenomena
- Demonstrate informed understandings of scientific claims and their applications
- Evaluate the quality of the data, methods, and inferences used to generate scientific knowledge
- Identify societal or philosophical implications of discoveries in the natural sciences, as well as their potential to address contemporary problems.

Social and Behavioral Sciences (GS)

In Social and Behavioral Science (GS) fields, students focus on analyzing the forces that influence behaviors, values, habits, attitudes, and institutions. GS courses allow students to explore the multiple perspectives and methodologies useful in analyzing and addressing complex social issues.

To help students achieve GS goals, the university provides GS courses and an appropriate learning environment for students to:

- Explore the interrelationships of the many factors that shape behavior
- Be introduced to methodological analyses of the forms, practices, and theories of politics, economics, and social institutions

- **Develop comprehensive, integrated, reasoned, and theoretical views of their contemporary and emerging social worlds**
- **Expand their understanding of how social, political, and economic influences and trends affect individual, group, organizational, local, national, and global contexts.**

GS Student Learning Criteria. Upon successful completion of the General Education Social and Behavioral Sciences (GS) requirement, students should have increased their abilities to:

- **Explain the various methods of inquiry used in the social and behavioral sciences and describe how the contributions of these fields complement inquiry in other areas**
- **Identify and explain major foundational theories and bodies of work in a particular area of social and behavioral sciences**
- **Describe the ways in which many different factors may interact to influence behaviors and/or institutions in historical or contemporary settings**
- **Explain how social and behavioral science researchers use concepts, theoretical models and data to better understand and address world problems**
- **Recognize social, cultural, political and/or ethical implications of work in the social and behavioral sciences.**

Part II. Principles for Integrative Studies: Recommendations 2, 3, and 4

As noted above, the 6-credit Integrative Studies requirement for baccalaureate students is new.¹ Two Pathways, Inter-Domain Courses and Linked Courses, were specified in the April 2015 legislation. Both involve relating different Knowledge Domains (GA, GH, GHW, GN, GS) to each other. Both Pathways require students to study related subject matter from the perspective of two Knowledge Domains. Each Linked Course provides sustained focus on a single Knowledge Domain, with connections to another course in a different Knowledge Domain, while each Inter-Domain course provides the immediacy of incorporating two Knowledge Domains in the same course. Such Integrative Studies coursework promotes an awareness of how different disciplines and methods of inquiry can speak to shared concerns. The goal of Integrative Studies is both curricular coherence and the exploration that occurs when students move beyond a single intellectual framework. Integrative Studies coursework yields a multi-faceted understanding and an awareness that different disciplines and forms of knowledge make particular and special contributions to our overall understanding. Both existing and new courses are eligible to be designated as Integrative Studies.

Several recommendations to clarify the Integrative Studies requirement appear below.

Pathways and Student Choices. The Faculty Senate's April 2015 legislation provides students with two Pathways (Inter-Domain and Linked) to complete the Integrative Studies requirement, with the possibility that further Pathways might be developed. The Implementation Committee recommends that students satisfy their Integrative Studies requirement within a single Pathway in order to keep degree progress as clear as possible. (The Senate may use assessment data to inform development of future Pathways or perhaps combinations.) At least two Knowledge Domains must be included, though student choices may involve more. To promote flexibility and encourage students to practice integration throughout their undergraduate years, the Integrative Studies courses may be taken at any time. They do not have to be

¹ Except where otherwise indicated, this report refers to baccalaureate degree programs and the students enrolled in them.

taken in the same or in adjacent semesters, though that will often be advantageous²; the goals of curricular coherence and exploration of multiple frameworks can be achieved with a variety of timetables.

In order to establish clarity and provide flexibility, the Implementation Committee makes the following recommendation:

Recommendation 2. Students will complete the Integrative Studies requirement within one of the approved Pathways—the Inter-domain Pathway, the Linked Courses Pathway, or a further Pathway if legislatively approved. Courses in the student’s selected Integrative Studies Pathway may be taken at any time in the student’s course of study. The student’s Integrative Studies choices must include courses approved for at least two Knowledge Domains (GA, GH, GHW, GN, GS).

Flexibility. The plan for implementing the new Integrative Studies component must be sufficiently nimble to allow faculty members and administrators in all units and at all locations, whether they are at University Park, the stand-alone colleges, or University College campuses, to optimize their resources and engage their constituencies in innovative ways. That agility has to be enabled by flexibility within student information systems and other software. Although support systems are not within the scope of our committee, we reiterate that pedagogical integrity is the driver of our curriculum.

Recommendation 3. Flexibility is essential if Linked Courses and Inter-Domain Courses are to be feasible and attractive Pathways for students in all units and at all locations. Exceptions and substitutions can be made by the Associate Deans, the Directors of Academic Affairs (DAAs), or through the normal petition process or other approval process of the student’s college of graduation. Special situations relating to flexibility may include: (a) the need to honor articulation agreements; (b) the distinctive needs of change-of-location students and transfer or advanced standing students, which will receive careful consideration, though it is anticipated that most students will complete the Integrative Studies requirement through Penn State courses; (c) Education Abroad, which may be approved for the Integrative Studies requirement where appropriate.

Single Domain Courses. Integrative Studies courses, and other curricular opportunities that bridge domains or otherwise provide flexibility in a student’s program, are not intended to completely replace coursework that stays wholly within one Knowledge Domain (Single Domain courses). It is essential for students to experience the focus that characterizes Single Domain coursework, as well as to explore integration between domains. For example, a student might use Inter-Domain courses for 6 of the 9 credits required in Natural Sciences, but would need to take at least 3 credits of coursework in Natural Sciences alone. Therefore, the Implementation Committee proposes the following recommendation:

Recommendation 4. Because students need to experience the Knowledge Domains as such, students must take at least 3 credits of Single Domain coursework in each of the Knowledge Domains (GA, GH, GHW, GN, GS). A student’s use of Inter-Domain courses, substitutions, or other flexibility options cannot replace this requirement.

² The April 28, 2015 report stated the viewpoint in its narrative (p. 18) that "At least one of the linked courses should carry the other course(s) as a prerequisite or concurrent course requirement" (<http://senate.psu.edu/wp-content/uploads/sites/13525/2015/04/AppB.pdf>).

Part III. Implementing the Integrative Studies Pathways: Recommendations 5 and 6

As noted above, two Pathways for Integrative Studies, Linked Courses and Inter-Domain Courses, were approved in April, 2015. Integrative Studies courses will have a distinctive intellectual dimension. Because they ask the student to consider a topic from the perspective of two different General Education Knowledge Domains, they aim to advance the student's ability to comprehend things from multiple perspectives, to see connections, and to grasp the concept that one must employ different modes of thinking, different epistemologies to understand more adequately the nature of things; one domain is not fully equal to the task of understanding the world around us. Each Linked Course provides sustained focus on a single Knowledge Domain, with connections to another course in a different Knowledge Domain; while each Inter-Domain course provides the immediacy of incorporating two Knowledge Domains in the same course.

General Education, including the new Integrative Studies requirement, is a faculty-driven endeavor. In January, 2015, the Faculty Senate approved an Advisory/Consultative Report to establish a General Education support unit with funding and other resources to assist faculty members and other instructors who are engaged with Penn State's General Education curriculum. Given that the Integrative Studies component invites and requires faculty members from different Knowledge Domains to work together, specific support must be provided at all levels—within academic units as well as by the General Education support unit—in order to reach and include a wide range of interested faculty members in ways that ensure openness, inclusiveness, and rigor, while also rewarding broad participation.

The Linked Courses Pathway. As a Pathway approved to meet the Integrative Studies requirement, Linked Courses, each approved for a single Knowledge Domain, demonstrate how the various disciplines within the General Education Knowledge Domains speak to one another and how knowledge in one Domain relates to knowledge in another. Courses are usually linked purposefully by subject matter, but they may be linked by some other common interest, such as an engaged scholarship project, shared assignments, shared readings, etc. The charge to the Special Committee includes proposing a process of consultation for Linked Courses, including approval criteria that ensure academic rigor and distribution across domains in the design and staffing of these courses. The following recommendation (Rec. 5) provides general principles and criteria to assist faculty members in planning and proposing courses for the Linked Courses Pathway for the Integrative Studies requirement, and to guide the Senate Committee on Curricular Affairs and other participants in the approval process.

Linkages must include courses from different General Education Knowledge Domains (GA, GH, GHW, GN, GS). Many courses that might potentially be linked exist now. For example, a course dealing with sustainability from a biological perspective (GN) might partner with another dealing with sustainability in a social and behavioral sciences field (GS). Flexibility will be available because courses can be proposed for either permanent or single-offering linked status. Students will need to take 6 credits from the same Linkage (which may include more than two courses), in different Knowledge Domains, to fulfill the requirement. Brief examples of possible linked courses are provided in **Attachment 5**.

Recommendation 5. The Senate endorses the following General Principles for the Linked Courses Pathway.

- a. Linked Courses are interrelated General Education Knowledge Domain courses, each meeting the criteria of its own Knowledge Domain (GA, GH, GHW, GN, or GS), that approach similar subject matter from different intellectual perspectives or are connected in some other purposeful way to provide opportunities for students to experience and practice integrative thinking across Knowledge Domains. Each Linked Course is approved for only one Knowledge Domain and is also part of a**

Linkage that includes courses from different Knowledge Domains.

- b. The student must complete courses that are linked with each other, each in a different General Education Knowledge Domain (thus including at least two Knowledge Domains), for the linked set to fulfill the Integrative Studies requirement. A single course alone does not count for the Linked Courses Pathway in the Integrative Studies requirement even if that course has been approved to be part of a Linkage. However, because each Linked Course satisfies a Knowledge Domain requirement, the student can use it within that Domain (or perhaps elsewhere in the student's program) whether or not the Linkage is completed. Although students will usually fulfill the 6-credit Linked Courses Pathway by taking two 3-credit courses, in this Pathway students may also use courses carrying anywhere from 1 to 5 credits towards the total of 6 Linked Courses credits.**
- c. More than two courses may participate in a Linkage; having more than two courses available in a Linkage will provide flexibility and may facilitate students' abilities to complete the package. Each such course is taught by an instructor, or team of instructors, with appropriate expertise in the course's Knowledge Domain.**
- d. Linkages are proposed by faculty members (or teams of faculty members) with expertise in the relevant disciplines of each Knowledge Domain; proposals will follow the established curricular processes for course approvals.**
- e. Either single-offering or permanent approval for the Linked Courses designation may be requested. A course may be offered using single-offering approval a maximum of 3 times at a given location.**
- f. Proposals for Linked Courses will:**
 - i. Request (or have received) approval as a General Education course in a particular Knowledge Domain, following the standard curricular processes.**
 - ii. Explain how the intellectual frameworks and methodologies of each course's Knowledge Domain will be explicitly addressed in the course and practiced by the students.**
 - iii. Explain how the courses in the Linkage will be linked with each other. It is anticipated that courses will usually be linked by subject matter, but they should additionally be linked by some purposeful component that provides opportunities for students to experience and practice integrative thinking across Knowledge Domains. The Linkage component between courses needs to be intentional and explicit to students. However, each course in a Linkage must be self-contained such that students can successfully complete just one course in the Linkage if they so choose.**
 - iv. Include evidence of unit-level (department, program) and College-level administrative approval of the courses and Linkages, and evidence of substantive consultation among faculty members with expertise in the appropriate Knowledge Domain(s) and discipline(s).**
 - v. Briefly explain the staffing plan. Given that each Linked Course is approved for a single Knowledge Domain, it will be taught by an instructor (or instructional team) with appropriate expertise in that domain, who will also be expected to implement the Linkage's shared component as defined in the proposal.**
 - vi. Describe the assessments that will be used to determine students' ability to apply integrative thinking.**

The Inter-Domain Pathway. As a Pathway approved to meet the Integrative Studies requirement, Inter-Domain courses each demonstrate how two Knowledge Domains speak to one another and how knowledge in one Domain relates to knowledge in another. Inter-Domain courses are each approved for two Knowledge Domains and demonstrate consistently how knowledge is integrated across these two Domains.

The charge to the Special Committee includes proposing a process of consultation for Inter-Domain Courses, including approval criteria that ensure academic rigor and distribution across domains in the design and staffing of these courses. The following recommendation (Rec. 6) provides general principles and criteria to assist faculty members in planning and proposing courses for the Inter-Domain Pathway for the Integrative Studies requirement, and to guide the Senate Committee on Curricular Affairs and other participants in the approval process.

Each Inter-Domain course integrates and meets the criteria of two Knowledge Domains (GA, GH, GHW, GN, GS), as explained below. Courses that might potentially be designated as Inter-Domain exist now. An example is Chemistry and Literature, which is listed in the Undergraduate Bulletin as CHEM 233 and ENGL 233; this course is now designated GN and GH. Other examples of possible Inter-Domain courses are provided in **Attachment 5**. Flexibility will be available because courses can be proposed for either permanent or single-offering Inter-domain status. In this Pathway, baccalaureate degree students must take 6 credits of Inter-Domain courses in order to fulfill the Integrative Studies requirement.

Recommendation 6. The Senate endorses the following General Principles for the Inter-Domain Pathway.

- a. An Inter-Domain course integrates, within one course, selected perspectives, concepts, information, and knowledge from two of the following Knowledge Domains: GA, GH, GHW, GN, GS.**
- b. An Inter-domain course counts towards the General Education requirement in both of its two Knowledge Domains and it provides opportunities for students to experience and to practice integrative thinking across those two Domains.**
- c. Students must complete 6 credits of Inter-Domain coursework in order to use this Pathway to fulfill the Integrative Studies requirement. Because these courses integrate two Knowledge Domains, and need time to do so, they will each carry at least 3 credits. Although students will usually take two 3-credit courses to fulfill this Pathway, students can also use Inter-Domain courses carrying more than 3 credits, if available.**
- d. Each of the two Knowledge Domains in an Inter-Domain course will receive approximately equal attention (in course topics, assignments, or other course components). Each such course is taught by an instructor, or team of instructors, with appropriate expertise in the two Knowledge Domains for which the course is approved. Inter-Domain courses may be cross-listed or concurrent-listed but this is not required.**
- e. Although each Inter-Domain course will satisfy a Domain requirement in both of the Knowledge Domains for which it is approved, the number of credits it contributes towards the total of 30 credits required in the Knowledge Domains is not doubled. (For example, a 3-credit course approved as both Natural Science and Social Science will**

satisfy a Domain requirement in both of those categories; however, this course will contribute 3 credits, not 6, to the total of 30 needed).

- f. **Inter-Domain courses are proposed by faculty members (or teams of faculty members) with expertise in the relevant disciplines of each Knowledge Domain represented; proposals will follow the established curricular processes for course approvals. Consultation and support from faculty members in relevant fields within both Knowledge Domains where the course will count is required.**
- g. **Single-offering or permanent approval for the Inter-Domain Courses designation may be requested. A course may be offered using single-offering approval a maximum of 3 times at a given location.**
- h. **Proposals for Inter-Domain courses will:**
 - i. **Request (or have received) approval as a General Education course and satisfy the criteria for two Knowledge Domains, following the standard curricular processes. Course proposals will not be approved for more than two Knowledge Domains.**
 - ii. **Explain how the intellectual frameworks and methodologies of the two Knowledge Domains will be explicitly addressed in the course and practiced by the students.**
 - iii. **Demonstrate that each of the two domains will receive approximately equal attention, providing evidence from course topics, assignments, or other course components, and that students will integrate material from both domains.**
 - iv. **Include evidence of unit-level (department, program) and College-level administrative approval of the courses, and evidence of substantive consultation among faculty members with expertise in the appropriate Knowledge Domains and discipline(s).**
 - v. **Where Inter-Domain courses are cross-listed, consultation with both of those academic units and their Colleges is required. For other Inter-Domain courses, given that all the Knowledge Domains are offered by more than one unit and College, this dual-Domain consultation and support should occur with the most closely related units and Colleges (more than one such unit and College may be relevant).**
 - vi. **Briefly explain the staffing plan. Given that each Inter-Domain course is approved for two Knowledge Domains, it will be taught by an instructor (or instructional team) with appropriate expertise in both domains.**
 - vii. **Describe the assessments that will be used to determine students' ability to apply integrative thinking.**

Process for Courses to Receive an Integrative Studies Designation. The following section outlines key processes for Integrative Studies proposals.

1. Department/program level first steps. All course proposals come from faculty members, with approval by administrators in the academic departments, programs, or divisions at campus locations (as proposals do now). A faculty member's first step will be to consult with his/her colleagues and the appropriate administrator. The unit administrator's buy-in will be crucial to ensure that the course, if approved, will be seen as a valuable addition to the teaching roster and will indeed be scheduled, staffed, and taught.
2. Curricular consultation. Integrative Studies course proposals will require consultation and support among faculty members with expertise in appropriate Knowledge Domains and disciplines. Evidence of consultation and support must be included when the proposal is formally submitted to the College/Campus and Senate approval processes.

3. Curricular Affairs proposals. The Curricular Affairs proposal format will include a section for requesting the information detailed in Recommendations 5(f) and 6(h) above.
4. Single-offering approvals. On a year-round, rolling basis, a subcommittee of the Senate Committee on Curricular Affairs will review proposals that request an Integrative Studies designation for a single offering (see Recommendation 7); this procedure for single-offering Integrative Studies approvals applies to all courses, including those numbered x97.

Part IV. Facilitating the Integrative Studies Approval Process: Recommendation 7

To best accommodate the highly dynamic nature of our university and faculty members' academic pursuits, the Integrative Studies course review process will need to be nimble. In order to help ensure timely action on proposals, a new Senate Curricular Affairs subcommittee to meet year-round should be established. Additionally, Integrative Studies courses depend on factors such as faculty collaboration and administrative support. Therefore, to monitor currency and rigor, these courses will be reviewed periodically.

Recommendation 7. Create a new subcommittee of the Senate Committee on Curricular Affairs. This subcommittee will provide guidelines, consistent with this legislative report, for course proposals intended to fulfill the Integrative Studies requirement. The subcommittee will review Integrative Studies proposals on a rolling, year-round basis. Further, this subcommittee will review Integrative Studies courses, after their approval, on a five-year basis.

Part V. Resources and Support for Integrative Studies

On January 27, 2015, the University Faculty Senate adopted an Advisory/Consultative report titled *Institutional Support and Resources for General Education*.³ The narrative of that report argued that “Given the scope and impact of General Education coursework across the University, supporting excellence, innovation, and scholarship in General Education should be a central priority for the University.” The report therefore called for a General Education support structure to serve as “an engine for collaboration, innovation, assessment, and research in General Education. Such a structure is necessary for improving our current General Education program, as well as for any future revisions to that program.” In response, President Eric Barron indicated his support of the Senate’s efforts to revise the General Education curriculum and his anticipation of receiving more detail from the Senate on its initiative.⁴

The Implementation Committee has been mindful of the need for more detail on Integrative Studies and on the kinds of university support necessary for successful implementation.⁵ To inform considerations about support, the committee conducted a Forensic Session at the January 26, 2016 University Faculty Senate meeting to explore what incentives Senators might suggest to facilitate the intended curricular change. Discussion at the Forensic Session focused in part on obstacles Senators saw to implementation, as well as on support and incentives they suggested would be useful. Four needs were identified: support for collaboration among faculty members, a strong communication network, released time, and administrative encouragement. Two obstacles were also identified: policies or practices that discourage team-teaching, and inadequate General Education funding throughout the University. Based on the January 2015 Advisory/Consultative report and the January 2016 Forensic Discussion, we offer the

³ <http://senate.psu.edu/senators/agendas-records/january-27-2015-agenda/appendix-f/>

⁴ <http://senate.psu.edu/wp-content/uploads/sites/13525/2015/01/Inst.-Support-and-Resources-for-Gen-Ed-Barron-letter.pdf>

⁵ <http://senate.psu.edu/senators/agendas-records/january-26-2016-agenda/appendix-b/>

following suggestions for responding to these considerations and for adequately resourcing this revision of General Education.

The committee suggests that:

1. *The University should enact the recommendations of the January 27, 2015 report* calling for the creation of “a signature intra-University faculty-led structure for General Education collaboration, support, assessment and research, which will be available to serve all Penn State locations and instructors who teach General Education courses,” working with appropriate Faculty Senate committees and providing a standing budget to support General Education.

The concerns detailed in the January 2015 report were echoed by many faculty members in the January 2016 Forensic Session. Planning and teaching integrated coursework will require collaboration among colleagues in many different disciplines, in many different units, and at many different locations. A strong communication network will be essential to help potential colleagues find partnerships to develop Linked and Inter-Domain courses, and to provide timely information on plans underway in various disciplines at locations across the university. Rather than just providing a space for spontaneous postings, this communication network will need proactive, ongoing leadership and support. It should foster critical exploratory assessment initiatives, as well as the type of curricular research which has long been a hallmark of Penn State teaching and learning.

2. *Ongoing University funding commitments for General Education should be developed with consideration for the many needs this curricular reform creates.* For example, these needs would include, but are not limited to, resources adequate to fund: team teaching as part of regular on-load assignments; released time for faculty members engaged in developing innovative curricula; opportunities for out-of-class activities in support of Integrative Studies courses; and sufficient instructional design services.

Several comments made during the Forensic Session noted that developing the kinds of integrated coursework the legislation calls for will require faculty members to invest substantive time and effort. Faculty members fear that without released time, they simply won't have the time it takes to produce innovative, high quality curricula. In addition, faculty interested in team teaching in the past have frequently been assigned only half-credit for teaching such courses, so that the only way to enable a team-taught course has frequently been faculty members' willingness to accept a course overload. Also, insufficient funding for General Education too often discourages meaningful out-of-class experiences for students.

The April 28, 2015 Senate legislative report on General Education included a detailed cost estimate, with high and low ranges, for such components as start-up costs, annual ongoing costs, direct expenses of instruction, funding for the support structure, some provision for team-teaching and smaller section sizes, support for course revision, and assessment. This April 2015 cost estimate is included as **Attachment 6**. While precise costs cannot be determined until implementation is underway, and will then vary through time, this cost estimate is a useful starting point for considerations of funding.

3. *Administrators at all levels and in all appropriate units should support faculty involvement in Integrative Studies.* Comments in the Forensic Session foreshadowed some ways in which General Education reform might be impeded if there is inadequate administrative support. For

example, faculty members are concerned that responsibility for designing and teaching Integrative Studies coursework will fall primarily on the least senior and/or the most vulnerable faculty members or other instructors, and this should not be the case.

Faculty members and other instructors (such as graduate students, at some locations) are also concerned that if they teach innovative Integrative Studies courses and do not receive high SRTEs, they will face negative consequences. On this latter point, administrators should be reminded—and should remind the faculty they work with—that University policy already provides that faculty members engaged in experimental coursework need not have SRTEs completed in experimental situations, or if they choose to have them administered, such SRTEs can be excluded from consideration during performance reviews.⁶ No faculty member should be penalized for experimenting with a new course design, which often is improved when it is informed by experience.

Part VI. Looking Forward

If the recommendations above are approved by the University Faculty Senate during Spring 2016, we anticipate that adequate support for curriculum development will be made available, as Provost Jones has previously indicated (Implementation Committee Forensic Report, January 2016). The Implementation Committee anticipates the following timetable:

Summer 2016-Spring 2017. The Senate Committee on Curricular Affairs develops updated procedures and worksheets; support is provided for faculty consultation, collaboration, and the preparation of course proposals for the Linked or Inter-Domain designation; submission and approval of Integrative Studies courses begins; Senate committees or other bodies begin to work with University colleagues in advising, student life, scheduling, student information systems, assessment, publicity, etc., to prepare for implementation of this Senate legislation.

As is already the case with the current General Education requirements, departments, programs, advising units, etc., update the worksheets they use for academic planning for their students. Sample worksheets to suggest how students might incorporate Linked Courses and Inter-Domain Courses into their General Education Breadth of Knowledge Domains are provided in **Attachment 7**; other formats, including interactive online worksheets, may be explored.

Fall 2017. Academic units submit their upcoming year's course schedules as usual, now including approved Linked Courses and Inter-Domain Courses.

2017-18 and thereafter. Consultations, proposal submissions and approvals, and support for course collaborations, development, and implementation will continue.

Fall 2018. Linked and Inter-Domain Courses are available to students. The Integrative Studies requirement will apply to students in the 2018-2019 Program Year. Assessment and other

⁶ Multiple University documents make this point. See, for example, http://www.srte.psu.edu/Faculty_admin_forms/ and http://www.psu.edu/dept/vprov/pdfs/srte_statement.pdf (Policy HR-23), which states in part “in advance of a course being taught for the first time in an experimental way, an administrator and a faculty member might agree not to administer the SRTE. Such agreements should be in writing.” Similar policy statements might be developed for graduate students engaged in teaching experimental courses.

research on aspects of the rollout, such as student choices, breadth of faculty participation across fields, start-up and continuing costs, etc., will also begin.

As this timetable suggests, the implementation of Integrative Studies within General Education is envisaged as an ongoing process. As mentioned in the April 2015 legislation, the Senate may develop additional Integrative Studies Pathways. In addition, ongoing assessment, data analysis, and pedagogical research will inform future proposals to adjust the implementation of Integrative Studies. The Implementation Committee thanks the many students and colleagues, University-wide, who have contributed to this report. We look forward to the next steps in providing students with this strengthened opportunity to see connections among the different parts of their Penn State General Education.

SPECIAL SENATE COMMITTEE ON IMPLEMENTATION OF THE GENERAL EDUCATION REFORM

- Andrew Ahr
- Martha Aynardi
- Robin Bower
- Michael Bérubé
- Caroline D. Eckhardt
- Jacqueline Edmondson
- Patricia Hinchey
- John W. Moore, Chair
- Emily Miller
- Kaitlyn O'Neill
- Robert Ricketts
- Richard Robinett
- Elizabeth M. Seymour
- Keith Shapiro
- Margaret Slattery
- David R. Smith
- Matthew Wilson

ATTACHMENT 1: CHARGE STATEMENT FROM CHAIR ANSARI

Date: May 21, 2015

To:
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Cynthia Zook cjz2@psu.edu, Support Staff

From: Mohamad A. Ansari
Chair - University Faculty Senate

Re: The Special Senate Committee on Implementation of the General Education Reform

At the April 28, 2015, plenary meeting, the University Faculty Senate ratified a legislative report entitled "Revision to General Education Curriculum," which was brought forward by the General Education Planning and Oversight Task Force. The Faculty Senate approved six recommendations pertaining to the General Education Curriculum (Appendix B <http://senate.psu.edu/wp-content/uploads/sites/13525/2015/04/AppB.pdf>).

- **Recommendation 1: Revise the current statement on General Education goals to include updated Learning Objectives.** *Implementation by inclusion in the Undergraduate*

Bulletin and other documents, advising and new student orientation, and course revisions by the Curricular Affairs Committee;

- **Recommendation 2: A regular and ongoing assessment plan for General Education Should be developed by the Faculty Senate and University bodies assigned to program assessment, following the principles described in this report. The plan should be approved by Faculty Senate, and findings should be used by the appropriate Senate committees to address areas for refinement and improvement. This recommendation pertains to the assessment plan to be designed in conjunction with the Office of Planning and Assessment and brought forward to the University Faculty Senate for its consideration and approval;**
- **Recommendation 3: Rename Health and Physical Activity (GHA) to Health and Wellness. Implementation by inclusion in the Undergraduate Bulletin and other documents, and advising and new student orientation;**
- **Recommendation 4: (a) Rename the “Skills” component of General Education to Foundations” and (b) rename the “Knowledge Domains component of General Education to “Breadth Across Knowledge Domains.” Implementation by inclusion in the Undergraduate Bulletin and other documents, and advising and new student orientation;**
- **Recommendation 5: (a) Require a C or better in GWS (Writing and Speaking) courses for the Baccalaureate and Associate General Education programs, and (b) require a C or better in GQ (Quantification) courses for the Baccalaureate and Associate Degree General Education programs. Implementation by inclusion in the Undergraduate Bulletin and other documents, and advising and new student orientation; and**
- **Recommendation 6: (a) Require 6 credits of Integrative Studies as part of the General Education Baccalaureate requirements; (b) create inter-domain courses as a way for students to accomplish the Integrative Studies requirement; (c) create linked courses as a way to offer the Integrative Studies component; (d) replace the “9-6-3” substitution with the more flexible “Move 3” substitution; and (e) allow an Integrative Studies course to satisfy the flexible 3 credits of exploration within the Associate Degree General Education Curriculum. Implementation by the Special Senate Committee on General Education Reform.**

The Special Senate Committee on Implementation of the General Education Reform is being appointed and is charged with the design of a clear and unambiguous process by which Recommendation 6 is to be implemented. More specifically, the Special Committee is charged to:

- Develop an implementation plan for inter-domain courses, and propose a process of consultation, including approval criteria that ensure academic rigor and distribution across domains in the design and staffing of these courses;
- Develop an implementation plan for linked courses, and propose a process of consultation, including approval criteria that ensure academic rigor and distribution across domains in the design and staffing of these courses;
- Consider, if the Special Senate Committee chooses to, the Topics for Further Consideration as stated in Part III of the April 28, 2015 Legislative Report from the General Education Planning

and Oversight Task Force. If such topics are considered, then the Special Committee will bring related Legislative Reports to the University Faculty Senate for its consideration and approval;

- Consult and maintain liaison with the University Faculty Senate Standing Committees on Curricular Affairs and Undergraduate Education; and
- Forward reports, prior to submission to the Senate Council, to the University Faculty Senate Standing Committees on Curricular Affairs and Undergraduate Education for consultation.

The Special Senate Committee on Implementation of the General Education Reform will be expected to present its work as follows:

- Prepare Legislative Report(s) for the University Faculty Senate Plenary meeting of December 8, 2015, January 26, 2016, or March 15, 2016

Please indicate your willingness to serve on this Special Senate Committee to Nichole Schlegel (nx112@psu.edu) by May 26, 2015. The University Faculty Senate will be in touch with you in the near future to schedule the charge meeting for the group.

On behalf of the University Faculty Senate, I would like to thank you for your kind consideration of this request.

Sincerely,



Mohamad A. Ansari, Chair
University Faculty Senate

CC: Nicholas P. Jones
Robert N. Pangborn
James A. Strauss

ATTACHMENT 2: CONSULTATIONS BY THE CHAIR OF THE IMPLEMENTATION COMMITTEE

The chair of the Implementation Committee, John Moore, has met with various groups and individuals, beginning in August, 2015, as shown below. Other members of the Implementation Committee have also conferred with colleague.

1. 8/3 Leslie Pillen, Center for Food Systems Studies
2. 8/10 Animal Science Faculty, College of Agricultural Sciences
3. 8/13 Tracy Hoover, Associate Dean, College of Agricultural Sciences
4. 9/1 Mary Beth Williams Associate Dean, Eberly College of Science
5. 9/1 Madlyn Hanes, Vice President for Commonwealth Campuses, and David Christiansen, Associate Vice President for Commonwealth Campuses
6. 9/4 Katelyn Perry, College of the Liberal Arts, Advising
7. 9/9 Scott Wing, Associate Dean, College of Arts and Architecture, and Keith Shapiro, Arts & Architecture
8. 9/22 Paul Taylor, Associate Dean, College of the Liberal Arts
9. 9/30 Conference of the Commonwealth Campuses Directors of Academic Affairs (DAAs) and Course Coordinators
10. 10/12 Susannah Barsom, Director of Academic Programs, Sustainability Institute
11. 10/13 Scott Smith, Director, Undergraduate Studies, Department of English
12. 10/15 Hampton Shirer, Associate Dean, College of Earth and Mineral Sciences
13. 10/16 William Kelly, Theater, and Keith Shapiro, College of Arts and Architecture
14. 10/26 Robert Kubat, University Registrar, and Paula Hamaty, Associate Registrar, Academic Records
15. 10/27 Senate Committee on Intra-University Relations, Chair, Roger Egolf
16. 10/30 Peter Butler, Associate Dean, College of Engineering
17. 10/19-11/8 Email discussions with Brent Yarnal, Donna Peuquet, and Jodi Vender, College of Earth and Mineral Sciences, Department of Geography
18. 11/9 Raymonde Brown, Associate Dean, College of Nursing
19. 11/10 Stephanie Knight, Associate Dean, College of Education
20. 11/17 Jeff Sharp, Associate Dean, Debbie Lissenden, Records, and Michael Gilpatrick, Director Planning and Assessment, Smeal College of Business
21. 11/17 Dennis Shea, Associate Dean, College of Health and Human Development
22. 11/18 Mary Beth Rosson, Interim Dean, College of Information Science & Technology
23. 11/30 Joseph Salem, Associate Dean, and Rebecca Miller, Head, Library Learning Services, The University Libraries
24. 12/3 Administrative Council on Undergraduate Education (ACUE)
25. 12/7 Commonwealth Caucus Evening Meeting, Co-Chair, Matthew Woessner
26. 12/8 Senate Committee on Undergraduate Education, Chair, Keefe Manning

27. 1/5 David Smith, Executive Director and Associate Dean for Advising and Laura Brown, Academic Advisor, Division of Undergraduate Education (DUS)
28. 1/12 Senate Council
29. 1/21 Liberal Arts Caucus of Senators, Chair, Dennis Gouran
30. 1/27 Senate Committee on Undergraduate Education, Chair, Keefe Manning

ATTACHMENT 3: SUMMARY OF SURVEY RESULTS, OCTOBER 2015

In October 2015, the Implementation Committee prepared and sent out a survey asking recipients to compare the existing descriptions and criteria of the seven General Education components with proposed revisions of the descriptions and criteria. The survey was sent to all members of the Senate, to faculty who had recently taught General Education courses, and to administrators in key roles related to General Education, inviting their input in order to arrive at proposed updates that would have widespread and current support. A summary of the results is provided here; for further data and details, see the Survey's webpages on the University Faculty Senate's website (<http://senate.psu.edu/gened-survey-results>).

The survey was sent to 2638 individuals, of whom 803 replied, a response rate of roughly 31%. The survey invited recipients to comment on each of the proposed new Student Learning Criteria for each of the seven categories of General Education requirements noted above: Quantification, Writing and Speaking, Arts, Humanities, Health and Wellness, Natural Sciences, and Social and Behavioral Sciences. The overall response was very strongly positive. For each of the proposed new criteria, the survey offered three choices. Choice (1) was "Keep as worded"; summing the data across responses to all criteria, 82% replied yes. Choice (2) was "Keep and reword"; summing the data across all questions, it received a response of roughly 14%. Choice (3) was "Delete and Remove"; it received a response of roughly 4%. Thus, 96% of the replies approved of the proposed domain revisions, either as-is or with suggested changes in wording.

Category	Keep as worded	Modify	Delete	Total Responses
<u>Foundations</u>	-	-	-	-
GWS	658 (76%)	185 (21%)	26 (3%)	869
GQ	723 (82%)	110 (13%)	46 (5%)	879
-	-	-	-	-
<u>Knowledge Domains</u>	-	-	-	-
GA	652 (84%)	97 (12%)	31 (4%)	780
GH	1034 (77%)	237 (18%)	67 (5%)	1338
GHW	650 (83%)	95 (12%)	35 (5%)	780
GN	752 (85%)	112 (13%)	21 (2%)	885
GS	581 (73%)	166 (21%)	45 (6%)	792

In response to the question "How Many Criteria Should Be Required" within each category, the responses were as follows:

0	1	2	3	4	5	6	Total
6 (<1%)	80 (7%)	207 (17%)	418 (34%)	335 (28%)	116 (10%)	47 (4%)	1209

Note: At the time of the Survey, there were different numbers of Criteria within the different categories. This has now been standardized at 5 within each category. Recommendation #1 in this report proposes that 3 out of 5 be required.

ATTACHMENT 4: CURRENT AND PROPOSED FOUNDATIONS AND KNOWLEDGE DOMAINS
CRITERIA

FOUNDATIONS

Current Criteria
Writing/Speaking (GWS)

The objective is for students to communicate information clearly and set forth their beliefs persuasively both orally and in writing. In particular, they must be sufficiently proficient in writing, such that their expository prose meets the expectations of educated readers in both form and style. Gaining communication skills in a natural language or languages other than English may be incorporated as part of the objectives of communications. (Senate Agenda, 4-30-85.)

In the review of the course proposal the General Education subcommittee will examine whether the proposal meets the General Education course criteria stated above and in addition shows how the course will:

1. teach students to organize materials in a logical and clear manner.
2. teach students to write clearly.
3. teach students to write proficiently with respect to form and style.
4. teach students to express ideas orally in a logical and clear manner.
5. provide constructive criticism of the efforts of students to meet the General Education objectives of the Writing/Speaking Area.
6. assess the degree to which its stated Writing/Speaking General Education objectives are met.

Proposed New Criteria
Writing/ Speaking (GWS)

In Writing and Speaking (GWS) courses, students do more than improve their abilities to communicate information clearly. They learn to set forth arguments persuasively and well, both orally and in writing. Students should emerge from their GWS courses as more accomplished writers and speakers, competent in a wide variety of settings.

To help students achieve GWS goals, the university provides GWS courses and an appropriate learning environment that will:

- Provide opportunities for students to become increasingly effective communicators as they enter new contexts and address new audiences
- Provide opportunities for students to become increasingly accomplished in written, oral, digital, and visual communication.

GWS Student Learning Criteria. Upon successful completion of the General Education Writing and Speaking requirements, students will have increased their abilities to:

- Demonstrate rhetorical and analytical skills as they explore, compose, interpret, and present a variety of texts
- Communicate effectively and persuasively to a range of audiences
- Demonstrate capacities for critical thinking, listening, and generating ideas
- Demonstrate proficiency in composing processes
- Employ the conventions of both spoken and written communication with sensitivity to context and venue.

Current Criteria
Quantification (GQ)

The objective is for the students to work with numbers so as to measure space, time, mass, forces and probabilities; to reason quantitatively; and to apply basic mathematical processes to daily work and everyday living. {Senate Agenda, 4-30-85)

In the review of the course proposal the General Education committee will examine whether the proposal meets the General Education course criteria stated above and in addition shows how the course will:

1. teach students to reason quantitatively.
2. teach students to measure probabilities.
3. apply basic mathematical principles and processes to practical problems of day-to-day living.
4. provide opportunities for students to formulate informed judgments based on quantitative reasoning.
5. assess the degree to which its stated Quantification General Education objectives are met.

Proposed New Criteria
Quantification (GQ)

In Quantification (GQ) fields, students practice and master basic mathematical and statistical skills of lifelong value in solving real world problems. Students should learn to apply mathematical skills appropriate to solve such problems.

To help students achieve GQ goals and master foundational quantification skills, the university provides GQ coursework and an appropriate learning environment that will:

- Provide experience in assessing and interpreting quantitative data and information
- Guide students to recognize patterns, establish relations, exercise conceptual thinking, develop problem-solving skills, and think logically and critically
- Provide students with opportunities to determine probabilities
- Support students in their efforts to draw accurate and useful conclusions; make informed decisions based on quantitative analysis; and use basic mathematical and statistical skills to solve conceptual problems.

GQ Student Learning Criteria. Upon successful completion of the General Education Quantification (GQ) requirement, students should have increased their abilities to:

- Use mathematical, statistical, or computational models, principles, and processes to integrate, synthesize, generalize, or make judgments about real world problems
- Recognize patterns, establish mathematical relations, apply problem-solving skills, and think logically and critically
- Develop, explore, analyze, and reason about multi-variable relationships using quantitative tools
- Use probability to reason and make judgments based on data that exhibit variability
- Communicate and explain mathematical and statistical ideas.

KNOWLEDGE DOMAINS (GA, GH, GHW, GN, GS)

Current Criteria

Arts (GA)

Students should understand and appreciate some of the more important creative works, traditions, literature and history of the arts and architecture. The student should recognize the comprehensive role of arts and architecture as an expression of the cultural values of a society and the need to preserve these expressions for the benefit of future generations.

Students should recognize aesthetic values as an integral part of society's essential need and gain lifelong benefits through the acquisition and appreciation of arts-related skills. Students should be conversant with the terminology, techniques, attitudes, ideas and skills which comprise the arts areas so as to understand the approaches to human existence and distinguish among the arts. (Senate Agenda, 4-30-85)

In the review of the course proposal the General Education committee will examine whether the proposal meets the General Education course criteria stated above and in addition shows how the course will:

1. develop an understanding of creative works of arts and architecture.
2. develop an understanding of the historical developments in arts and architecture.
3. provide an opportunity for students to comprehend the role of arts and architecture as an expression of the cultural values of a society.
4. help students become conversant with the terminology, techniques, and ideas that comprise the Arts Area.
5. lead students to a recognition of aesthetic values.
6. relate its field of study to other arts disciplines.
7. assess the degree to which its stated Arts General Education objectives are met

Proposed New Criteria

Arts (GA)

In Arts fields (GA), students focus on exploring or creating works of art. Students should become familiar with the importance of significant creative works, the traditions and history associated with those works, and the important role that the arts play as expressions of the cultural values of society and the human condition.

To help students achieve GA goals, the University provides GA courses and an appropriate learning environment with purposeful engagement with the arts and creative works for students to:

- Encounter and become conversant with the terminologies, techniques, practices, knowledge, and skills employed by the arts
- Gain a comprehension of the role that the arts play as expressions of the cultural values of society and the human condition
- Expand their knowledge of the variety of expressions and experiences that are provided through the arts
- Develop competencies in interpreting and critically evaluating diverse expressions in the arts.

GA Student Learning Criteria. Upon successful completion of the General Education Arts (GA) requirement, students should be able to:

- Explain the methods of inquiry in arts fields and describe how the contributions of these fields complement inquiry in other areas
- Demonstrate an expanded knowledge and comprehension of the role that the arts play in various aspects of human endeavor
- Demonstrate competence in the creation of works of art and design
- Demonstrate competence in analysis, critical thinking and interpretive reasoning through the exploration of creative works
- Identify and explain the aesthetic, historic, social, and cultural significance of important works of art and critically assess creative works, their own or others', through evaluative processes of analysis and interpretation.

Current Criteria
Humanities (GH)

The objective of humanistic studies is to direct students toward interpretation and evaluation for the sake of a more significant form of participation in reality, rather than in the direction of methodologies for the technical manipulation of natural and cultural phenomena. Humanistic studies are divided into four categories: (1) literature, (2) history and culture, (3) advanced language, and (4) philosophy.

The study of the Humanities should develop competency in interpretive understanding of the human condition and of the values inherent in it. This interpretive understanding should evolve into the development of insights and a critical evaluation of the meaning of life, in its everyday details as well as in its historical and universal dimensions. Through this development, students should acquire knowledge of and concern for the humanistic values which motivate and inform all humanistic studies.

In literature, students should achieve these objectives through the study of works in which the human condition is presented and evaluated through aesthetic means. In the study of Western and non-Western culture and history, the student should gain access to various human traditions and their changes through the course of time. In studies of the development, structure, and use of language, students will probe the foundations of communication and thought and become aware of the scope and limitations of human communication. In philosophical studies, students will encounter philosophical and religious concepts and traditions which attempt to bring ultimate sense to human existence. (Senate Agenda, 4-30-85)

In the review of the course proposal the General Education subcommittee will examine whether the proposal meets the General Education course criteria stated above and in addition shows how the course will:

1. develop broad, coherent overviews of major cultural or ideological currents throughout history.
2. develop emphases on important figures, ideas and events which influence the values of different societies.
3. develop competence in interpretive understanding of the human condition and of the values inherent in it.
4. lead the student to an appreciation of aesthetic values.
5. teach the student techniques for the objective evaluation of readings and the formulation of clear and valid responses.
6. assess the degree to which its stated Humanities General Education objectives are met.

Proposed New Criteria
Humanities (GH)

In Humanities (GH) fields, students focus on exploring important works of literature, history, religion, philosophy, and other closely related forms of cultural expression, thereby broadening their understanding of diverse ways of seeing, thinking about, and experiencing the self and society. Students will enlarge their intellectual horizons and knowledge of the world through encountering humanistic representations of both lived experiences and imaginative or speculative constructions, past or present. Students thus become increasingly prepared to live as thoughtfully engaged members of multiple communities, whether local, regional, or global.

To help students achieve GH goals, the University provides GH courses and an appropriate learning environment for students to:

- Engage in the qualitative study of the humanities
- Expand their knowledge of the variety of human experiences
- Gain access to various intellectual traditions and their changes through time
- Probe the foundations of communication and thought and become aware of the scope and limitations of human communication
- Encounter concepts and traditions that attempt to bring sense to human existence
- Develop their competency in interpreting and critically evaluating diverse ways of life, traditions, and shared or individual values, including their own.

GH Student Learning Criteria. Upon successful completion of the General Education Humanities (GH) requirement, students should have increased their abilities to:

- Explain the methods of inquiry in humanities fields and describe how the contributions of these fields complement inquiry in other areas
- Demonstrate competence in critical thinking about topics and texts in the humanities through clear and well-reasoned responses
- Critically evaluate texts in the humanities-whether verbal, visual, or digital- and identify and explain moral or ethical dimensions within the disciplines of the humanities
- Demonstrate knowledge of major cultural currents, issues, and developments through time, including evidence of exposure to unfamiliar material that challenges their curiosity and stretches their intellectual range
- Become familiar with groups, individuals, ideas, or events that have influenced the experiences and values of different communities.

Current Criteria

Health and Physical Activity (GHA)

Courses will focus on the theory and practice of life span wellness and fitness activities, and on the knowledge, attitudes, habits, and skills needed to live well. Courses are expected to promote an active and healthful lifestyle and are understood to include such diverse topics as diet, exercise, stress management, the wise use of leisure time, alcohol consumption and drug use, sexual health awareness, and safety education. Courses may be knowledge-focused or practice-focused or integrated in any manner. Theory-focused courses are understood to emphasize the transmission of knowledge about some aspect of healthful living. Practice-focused courses are understood to emphasize attitudes, habits, and skills needed to engage in healthful living. Traditional dance, exercise, and sport activity classes are understood to meet the practice-focused criterion if they will promote healthful living across the life span.

In the review of the course proposal the General Education committee will examine whether the proposal meets the General Education course criteria stated above and in addition shows how the course will:

1. teach students to achieve and maintain good health.
2. promote an active and healthful lifestyle.
3. transmit knowledge about some aspect of healthful living, when emphasizing theory.
4. develop attitudes, habits, and skills needed to engage in healthful living and promote healthful living across the life span, when emphasis on practice (dance, exercise, and sport activity).

Proposed New Criteria

Health and Physical Activity (GHW)

In Health and Wellness (GHW) fields, students focus on the physical and psychosocial well-being of individuals and communities. They expand their theoretical and practical knowledge about health and wellness-concepts that are multidimensional and culturally defined. The University provides opportunities for students to study such diverse topics as nutrition, physical activity, stress, sleep, healthy leisure, alcohol, tobacco, and other substance use, sexual health, and safety-all useful in maintaining lifelong health and wellness and in creating healthy work and community environments.

To help students achieve GHW goals, the University provides GHW courses and an appropriate learning environment for students to:

- Identify and practice skills, attitudes, and behaviors that should enable them to better maintain health and wellness across their lifespans
- Identify wellness as a positive state of well-being, not merely the absence of disease or illness
- Recognize the importance of social, emotional, and physical health and wellness for communities as well as for individuals.

GHW Student Learning Criteria. Upon successful completion of the General Education Health and Wellness (GHW) requirement, students should have increased their abilities to:

- Explain the methods of inquiry in Health and Wellness fields and describe how the contributions of these fields complement inquiry in other areas
- Describe multiple perceptions and dimensions of health and wellness (emotional, spiritual, environmental, physical, social, intellectual, and occupational)
- Identify and explain ways individuals and/or communities can achieve and maintain health and wellness
- Describe health-related risk factors and explain changes in knowledge, attitudes, behaviors, activities or skills that have the potential of improving health and wellness
- Disseminate knowledge about health and wellness and demonstrate behavioral practices needed to engage in healthy living across the life span.

Current Criteria
Natural Sciences (GN)

The goal of the Natural Sciences is to reveal the order, diversity, and beauty of nature and in so doing enable students to develop a greater appreciation of the world around them. The objective of the Natural Sciences is to understand the nature of science through exposure to the broad divisions of science—physical science, biological science, earth science, and applied natural science. The students should know how to acquire scientific factual information, to use scientific methodology and to develop an appreciation of the natural world.

All divisions of Natural Science employ inductive reasoning and establish theories and laws of nature based on observation, and deductive reasoning to draw conclusions based on these theories and laws. Such reasoning is applied to the study of both non-living and living matter. Students should gain an understanding of how scientists reason and how they draw conclusions. (Senate Agenda 4-30-85)

In the review of the course proposal the General Education committee will examine whether the proposal meets the general General Education course criteria stated above and in addition shows how the course will:

1. broadly survey the existing knowledge in the discipline.
2. develop an understanding of the inductive reasoning process and develop a student's ability to reason inductively.
3. develop an understanding of the deductive reasoning process and develop a student's ability to reason deductively.
4. include, if appropriate, laboratory work.
5. relate its field of study to other fields of the natural sciences.
6. assess the degree to which its stated Natural Sciences General Education objectives are met.

Proposed New Criteria
Natural Sciences (GN)

In Natural Science (GN) fields, students develop the skills necessary to make informed judgments about scientific information and arguments. Along with building knowledge of foundational scientific principles, students expand their understanding of how and why science works, why it is an effective tool for knowledge generation, and how it can address contemporary questions and challenges.

To help students achieve GN goals and develop this scientific literacy, the University provides GN courses and an appropriate learning environment for students to:

- Encounter the order, diversity, and beauty of nature
- Sample some of the ways in which science offers an additional lens through which to view the human condition
- Engage with scientific material through discussion, exploration, data analysis, and experimentation
- Gain practice in recognizing the nature of scientific process and discovery, in identifying what science can and cannot achieve, and in analyzing why scientific arguments may lead to different conclusions than other forms of intellectual discourse.

GN Student Learning Criteria. Upon successful completion of the General Education (GN) requirement, students should have increased their abilities to:

- Explain the methods of inquiry in the natural science fields and describe how the contributions of these fields complement inquiry in other areas
- Construct evidence-based explanations of natural phenomena
- Demonstrate informed understandings of scientific claims and their applications
- Evaluate the quality of the data, methods, and inferences used to generate scientific knowledge
- Identify societal or philosophical implications of discoveries in the natural sciences, as well as their potential to address contemporary problems.

Current Criteria

Social and Behavioral Sciences (GS)

The objective of the Social and Behavioral Sciences is an understanding of the diverse personal, interpersonal, and societal forces which shape people's lives and to approach these subjects through the concepts, principles and methods of scientific inquiry. The general goal is a theoretical understanding of the interrelationships of the determinants of the organization of human behavior.

Students should be introduced to the scientific analysis of:

- (1) the forms, practices, and theories of politics;
- (2) the nature and operation of economic analysis;
- (3) the interrelationships of social institutions;
- (4) the dynamics of individual and group behavior and change; and
- (5) the processes and functions of human communication.

Through the application of the methodologies of the Social and Behavioral Sciences, students should develop an understanding of the multiple nature of causality in social settings. The Social and Behavioral Sciences require a comprehensive, integrative, empirical and theoretical view of the social world. (Senate Agenda, 4-30-85)

In the review of the course proposals the General Education subcommittee will examine whether the proposal meets the General Education course criteria stated above and in addition shows how the course will:

1. broadly survey the existing knowledge in the discipline.
2. develop the student's understanding of the scientific methodologies of social and behavioral sciences.
3. develop an understanding of the multiple nature of causality in social settings.
4. relate its specific field of study, where appropriate, to other areas in the social and behavioral sciences.

Proposed New Criteria

Social and Behavioral Sciences (GS)

In Social and Behavioral Science (GS) fields, students focus on analyzing the forces that influence behaviors, values, habits, attitudes, and institutions. GS courses allow students to explore the multiple perspectives and methodologies useful in analyzing and addressing complex social issues.

To help students achieve GS goals, the university provides GS courses and an appropriate learning environment for students to:

- Explore the interrelationships of the many factors that shape behavior
- Be introduced to methodological analyses of the forms, practices, and theories of politics, economics, and social institutions
- Develop comprehensive, integrated, reasoned, and theoretical views of their contemporary and emerging social world
- Expand their understanding of how social, political, and economic influences and trends affect individual, group, organizational, local, national, and global contexts.

GS Student Learning Criteria. Upon successful completion of the General Education Social and Behavioral Sciences (GS) requirement, students should have increased their abilities to:

- Explain the various methods of inquiry used in the social and behavioral sciences and describe how the contributions of these fields complement inquiry in other areas
- Identify and explain major foundational theories and bodies of work in a particular area of social and behavioral sciences
- Describe the ways in which many different factors may interact to influence behaviors and/or institutions in historical or contemporary settings
- Explain how social and behavioral science researchers use concepts, theoretical models and data to better understand and address world problems
- Recognize social, cultural, political and/or ethical implications of work in the social and behavioral sciences.

ATTACHMENT 5: EXAMPLES OF POSSIBLE LINKED COURSES AND INTER-DOMAIN COURSES

An essential aspect of the Integrative Studies concept is that course proposals should be faculty-driven, allowing for innovation, experimentation, and responsiveness to student interests and local circumstances. We recognize that it is risky to give examples, lest they be understood as “the” patterns to follow and therefore tend to limit or foreclose the impetus to develop other possibilities. Nevertheless, having models can be useful to faculty in planning Integrative Studies offerings in both of the approved Pathways (Linked Courses and Inter-Domain Courses). The examples that follow are offered in that spirit. These examples do not completely describe the courses, but only highlight their distinctive characteristics as relating to Integrative Studies. Please note that the inclusion of particular courses in this attachment is based on brief information available to the Implementation Committee, often from the descriptions in the *Undergraduate Degree Programs Bulletin* descriptions, and mention of these courses here does not constitute advance Integrative Studies approval for them. If their academic units choose to propose them for the Linked or Inter-Domain designation, approval for these courses would follow the same process as for other courses.

Linked Courses: In what way(s) might courses be linked?

In the examples below, courses would likely meet the intentions of the Integrative Studies requirement because they would purposefully integrate perspectives from two knowledge domains, and students would practice integrative thinking in a course component informed by both domains.

1. A thriving example of how courses might be innovatively linked across domains already exists in the English Department’s series of *Adventure Literature* courses, which “combine the study of literature with outdoor adventures . . . [S]tudents not only read Thoreau, but like him they travel to the mountains, the river, or the seashore, and they climb, hike, and kayak, and write about their experiences.” Some offerings in this series pair themed literature (GH) and relevant Kinesiology (GHW) instruction. For example, in one pairing (“The Beach: Exploring the Literature of the Atlantic Shore”) students read the work of such writers as Henry Beston and Rachel Carson and travel to coastal South Carolina, where they visit historical sites and meet with local writers. The kinesiology portion of the coursework provides instruction in kayaking, including: its history; paddling; safety concerns; and “Leave-No-Trace” outdoor ethics. This instruction prepares students to use kayaking to explore the area’s cypress swamps, tidal marshes and barrier islands. Students earn 3 credits of English and 1.5 of Kinesiology. While these Linkages have been forged by faculty with specific interests, the concept of linking texts with outdoor experiences might be developed in a wide variety of locations.

The themed approach also opens the door to Linkages beyond humanities and kinesiology. For example, one theme in the series is food. In addition to allowing for connections between literature (GH) and wellness (perhaps using such GHW courses as Nutrition 100 or Food Science 105), a Linkage might also be developed with a course like Kitchen Chemistry (Chemistry 005, GN).

The *Adventure Literature* program may provide faculty with a starting point to imagine multiple ways existing courses can be linked. The English Department’s website (<http://english.la.psu.edu/undergraduate/adventure-literature>) and the program’s Facebook page (<https://www.facebook.com/PennStateAdventureLit/>) offer full details on the existing program for faculty who want to know more.

2. Two courses, Political Science 130, American Political Campaigns and Elections (GS), and Philosophy 119, Ethical Leadership (GH), would together allow students to apply their knowledge of

ethical theory to the complex undulation of American political elections. The course on Ethical Leadership emphasizes that such leadership requires a strong moral sense, honesty and integrity, commitment to self-reflection, and a willingness to put theory into practice by acting ethically. The course on American Political Campaigns and Elections explores politicians' integration of polls, political consultants, parties, and the media in the course of campaigning. If these courses shared, for example, a substantial combined work-product or assignments that integrate perspectives from both the humanities and social sciences, they would likely meet the intentions of the Integrative Studies requirement. Additional courses might also participate in this Linkage.

3. Several courses address drama from the perspectives of the performing arts (GA) and literature (GH). Existing courses might include Comparative Literature 153, International Cultures: Literature and Film (GH); Theatre 105, Introduction to Theatre (GA); Theatre 112, Introduction to Musical Theatre (GA); Communications 250, Film History and Theory (GA); French 142, French Fiction, Drama, and Film (GH); and English 129, Shakespeare (GH). In their literature courses, students would study the thematic content and literary techniques of the plays; in theatre and film courses, they would study the performative aspects and the types of choices that directors and performers make in moving from text to stage. As a culminating project, some students, in small groups, might present a scene from a play and prepare a paper explaining and justifying their choices as directors and performers, using both textual and performative perspectives. Other students, for example those in World Campus, might make an animated version of a scene, record themselves presenting a speech from a play, or in other creative ways incorporate and explain both the performative and textual perspectives in their choices.
4. Students from courses in Global Studies (GH), Linguistics (GS), International Arts (GA), and Latin American civilization (GH) participate in an ongoing English literacy partnership with a school in Latin America, using Skype to provide the school's students with opportunities to practice their English and to mutually learn about each other's cultural practices. Some students participate in a faculty-led short-term embedded study-abroad experience to visit this school and provide service there over Spring Break, but for other students the Linkage is wholly on World Campus. The Latin American school chosen is in an international location where Penn State has a GEN [Global Engagement Network] affiliation and/or a study abroad program, and this school-partnership project has the commitment of at least two of the participating academic departments, in different Knowledge Domains, to enable it to extend through multiple semesters.

This example is provided to suggest that both campus-specific and University-wide embedded study abroad opportunities can serve to create innovative and substantive Linkages among Knowledge Domains.

Inter-Domain Courses. In what ways might an individual course combine two Knowledge Domains?

In the examples below, each course would likely meet the intentions of the Integrative Studies requirement because it would purposefully integrate perspectives from two knowledge domains, and students would practice integrative thinking in course components informed by both domains, with approximately equal attention to each. (Note: descriptions of the courses are drawn from the *Bulletin* statements rather than the Committee.)

1. Gender Dynamics in Africa (African Studies 202 / Women's Studies 202) is now listed as GS and potentially might also be GH. The *Bulletin* description is "Critical analysis of multidisciplinary research on relations between men and women in Africa and critique of Western feminist theories." Feminism is one of the latest Western theoretical fashions to be applied to African societies. Although in terms of gender studies, Western academics have dominated the field, this course will offer a more

African-centered analysis of gender relations in Africa. Important African women writers will be read and their works analyzed. The role of African gender dynamics in the African diaspora will also be studied. This course would likely meet the intentions of the Integrative Studies requirement because it analyzes gender dynamics in historical and literary frameworks (GH) while using social science approaches to apply these concepts to African societies (GS).

2. Behavior, Health, and Disease (Biobehavioral Health 119) is now listed as GHW and potentially might also be GN. The *Bulletin* description is “Principles of health promotion, disease prevention, and treatment of acute and chronic illness.” This course provides a broad understanding of the major human diseases underlying morbidity and mortality in America. The course covers most major diseases using a variety of organizational schema including: (1) diseases according to organ systems, (2) diseases according to developmental and age-related processes, and (3) diseases according to causal factors including behavioral (lifestyle), environmental, and genetic factors. The course content is organized to encourage promotion of a healthy lifestyle, prevention of disease and understanding the causes and management of acute and chronic illness. This course would likely meet the intention of the Integrative Studies requirement because it ties the underlying pathobiology of disease states (GN) with direct applications to health (GHW).

ATTACHMENT 6: COST ESTIMATE (AS OF SPRING 2015) FOR THE GENERAL EDUCATION REFORM THAT THE SENATE APPROVED ON APRIL 28, 2015

The cost estimate that follows, "Estimated ranges for the additional cost of the proposed General Education revisions beyond the cost of the current General Education program," has been reproduced from the Senate Agenda of April 28, 2015, where it was included in the Legislative Report from the General Education Task Force (Appendix B of the April 28, 2015 Agenda). At that time, the estimate was prepared by Senators who were members of the General Education Task Force in collaboration with administrative representatives and others who provided budgetary data, other types of information, and much-appreciated expertise.

It is important to emphasize that this cost estimate is just that—an estimate—not an actual budget. It necessarily relied on assumptions that will need to be either confirmed or adjusted after actual implementation data become available.

Some of the cost categories shown here, such as an ongoing, annual estimate for faculty development for Integrative Studies, are specific to this component of General Education. However, other categories included in this estimate would apply to General Education as a whole, rather than specifically to Integrative Studies. For example, the estimate includes costs for a General Education support structure that would benefit not only Integrative Studies but also other aspects of General Education. Further, the cost estimate reflects an anticipated increase in 200-level courses that was not actually legislated in April, 2015 and is not part of the present proposal.

Despite its limitations, this cost estimate can provide a useful starting-point for budgetary considerations.

Attachment 6: Estimated ranges for the additional cost of the proposed General Education revisions beyond the cost of the current General Education program. This estimate was a part of Appendix B in the April 28, 2015 Senate Agenda. <http://senate.psu.edu/senators/agendas-records/april-28-2015-agenda/appendix-b/>

Start-up Costs	Range	
	low	High
Adviser/faculty training	\$10,000	\$30,000
Development & design of material for incoming students/NSO (assistance from StratCom?)	\$5,000	\$10,000
Faculty and staff time for curriculum development and revision '	\$170,000	\$425,000
Total Non-recurring Start-up costs	\$185,000	\$465,000
Annual - Ongoing Costs		
Instruction:		
Instructional Capacity for additional sections for students who earned a "D" in a GQ or a GWS courses to retake the course	\$575,000	\$2,800,000
Offering more 200-level courses and fewer 100-level courses - 110 net new sections due to smaller average section size for 200-level courses (assumes all Integrative Studies courses are 200-level)	\$440,000	\$2,300,000
Ongoing faculty development for Integrative Studies'	\$1,488,000	\$4,464,000
	Instruction Sub-Total	\$2,503,000 \$9,564,000
General Education Support Structure'		
Director and Staff	\$236,250	\$310,500
Gen Ed Innovation and Quality Improvement Grants	\$200,000	\$400,000
Assessment'	\$90,000	\$135,000
Operating funds -technology, travel between campuses, campus liaisons, conference attendance, etc.	\$60,000	\$80,000
	General Education Support Structure Subtotal	\$586,250 \$925,500
Total Ongoing Costs	\$3,089,250	\$10,489,500
Grant Revenue Goal\$ for Innovation and Quality Improvement to Offset Ongoing Costs	\$100,000	\$250,000

This cost estimate was presented to and discussed with Provost Jones on April 14, 2015.

¹UP delivered 650 General Education Courses in Fall 2012 -13. Assuming that campuses are delivering the same Gen Ed courses, course development/revision would be needed for the 13% of these courses that would need to be Integrative Studies (650 x 13% = 85 courses).

²Faculty development for Integrative Studies is estimated at \$4,000/section for 25% of Integrative course sections (low) and 75% of sections (high).

³On January 27th, the Faculty Senate voted to approve a standing General Education Support Structure to function as an engine for collaboration, innovation, assessment, and research in General Education. This budget assumes a need for a faculty director and two staff members, one with significant experience in assessment in addition to a standing budget to fund grants for faculty proposals to develop innovative curriculum. Funding priorities should be given to proposals that will significantly improve general education at Penn State, scale to the university level, and be competitive for funding from external sources.

⁴The current CAT assessment employs faculty at \$300 each to score the assessment. If the same method were used annually for assessing two learning objectives, involving 30 faculty from five units, the estimated cost of appropriate compensation for faculty scorers is about \$90,000.

ATTACHMENT 7: SAMPLE GENERAL EDUCATION BACCALAUREATE DEGREE
WORKSHEETS

Two sample worksheets are shown here. They are intended only as possible formats for visualizing ways in which the new General Education can include 6 credits of integrative Studies.

As is already the case with the current General Education requirements, departments, programs, advising units, etc., may devise worksheets that seem most appropriate for their students. Interactive online worksheets, enabling students to try out different choices and see where each course would fit into their individual academic programs, are also being explored.

Worksheet: Sample A

Foundations: 15 Credits

Writing/Speaking Skills (GWS)	9 Credits	Quantification (GQ)	6 Credits
GWS Writing—3 cr	--	GQ Quantification —3 cr.	-
GWS Writing—3 cr.	-	GQ Quantification —3 cr.	-
GWS Speaking—3 cr.	-	-	-

Breadth Across Knowledge Domains: 30 Credits

Natural Sciences (GN)-		Humanities (GH)--	
GN Single Domain—3 cr.	-	GH Single Domain—3 cr.	-
GN Single Domain or Inter-Domain-3 cr.	-	GH Single Domain or Inter-Domain—3 cr.	--
GN Single Domain or Inter-Domain-3 cr.	-	--	-
		Social and Behavioral Sciences (GS)	
Arts (GA)-		GS Single Domain—3 cr.	-
GA Single Domain—3 cr.	-	GS Single Domain or Inter-Domain—3 cr.	-
GA Single Domain or Inter-Domain-3 cr.	-		-
-	--	Health and Wellness (GHW)-	
-	-	GHW Single Domain—3 cr.-	-

Integrative Studies (included above)		Additional Explorations (available when the Inter-Domain Pathway is chosen)	
Integrative Studies Course—3 cr.		Knowledge Domain Course—3 cr.	-
Integrative Studies Course—3 cr.		Knowledge Domain Course—3 cr.	

Other graduation requirements (US/International, Writing Intensive, First Year Experience, etc.) and forms of flexibility (“Move 3”, World Language substitution, 400-level substitution, etc.) are not shown on this Worksheet but would be part of the student’s planning as appropriate. For details see next page.

Flexibility in General Education (these are the flexibility provisions that relate to implementing Integrative Studies or Move 3 for baccalaureate students). The statement below is modified from the present Advising Handbook. Ideally students should develop their plans to use flexibility in General Education with their academic adviser.

Substitution of Higher Level Courses

With the approval of the student's adviser and appropriate dean's representative, a student may substitute 200- to 499-level courses for courses approved for General Education if they are in the same area of General Education. For example, a student might take PHIL 432, substituting it for a lower-level General Education humanities (GH) course.

Move 3 Substitution

In consultation with an adviser and the student's appropriate dean's representative, within the 30 credits of Breadth Across Knowledge Domains, students may substitute 3 credits from one Knowledge Domain for a course in one of the other Knowledge Domains. For example, a student might take one additional course in the Arts (GA) and one less in Natural Science (GN). This option does not apply to courses in the Foundations area and no domain may be reduced below 3 credits of single-domain coursework.

World Language Substitution

With the permission of his/her adviser and the appropriate dean's representative, a baccalaureate degree candidate may make one of the following world language substitutions (for this purpose, "world language" is defined as a language other than English):

1. If the student is enrolled in a major that **does not require** the 12th-credit level of proficiency in a world language, he/she may substitute 3 credits in a world language at the 12th-credit level (or higher) for 3 credits in any of the categories of General Education (with the exception of GHW, Health and Wellness, where only 3 credits are required). For example, a student majoring in nursing might substitute SPAN 003 for 3 credits in the Arts (GA).
2. If the student is enrolled in a major that **does require** the 12th-credit level of proficiency in a world language, he/she may substitute 3 credits in a world language beyond the requirements of his/ her degree program for 3 credits in any of the categories of General Education (with the
3. exception of GHW, Health and Wellness). For example, a student majoring in history, where 12th-credit level proficiency is already required, might substitute ARAB 110 (a 15th-credit-level course) for 3 credits in social science (GS).

If a student has demonstrated proficiency in one world language and elects to study another world language, he/she can use the 12th-credit level of the language as a world language substitution. For example, an international student from China who elects to study French might substitute FR 003 for 3 credits in Humanities (GH).

Students may not eliminate all Single Domain coursework in any General Education area by using the Move 3 Substitution, the World Language Substitution, Inter-Domain courses, or other forms of flexibility described above. A minimum of 3 Single-Domain credits each in GQ, GWS, GA, GH, GHW, GN, and GS is always required.

After a student completes a course that could take advantage of any of the flexibility provisions above, the student submits a request for the substitution in his/her department or college. When approved, the student's degree audit will show that the substitution has been made.

A student who wants to take advantage of options for flexibility in General Education should talk to his/her academic adviser or contact the appropriate Academic Advising Center.

Worksheet: Sample B

FOUNDATIONS (15 credits; C or better grades required)

6 credits Writing (GWS) ENGL 015 3cr ENGL 202D 3cr

3 credits Speaking (GWS) CAS 100A 3cr

6 credits Quantification (GQ) MATH 034 3cr STAT 100 3cr

KNOWLEDGE DOMAINS (30 credits)

Get Exposure and Experience (15 credits)

Complete one course in each area. Inter-domain courses cannot be listed here. No substitutions may be used in for these courses. 3 credits of single-domain coursework are required for each domain.

BI SC 003 3cr **Natural Science (GN)**

THEA 100 3cr **Arts (GA)**

RL ST 001 3cr **Humanities (GH)**

ECON 102 3cr **Social Sciences (GS)**

NUTR 251 3cr **Health and Wellness (GHW)**

Build Focus and Connections (15 credits)

Integrative Studies (6 credits) Choose two 3-credit Inter-Domain Courses or two 3-credit Linked Courses

ANTH 216 Knowledge Domains: GN/GS ART H 225 Knowledge Domains: GA/GH

Check all of the Knowledge Domains these courses fulfill in the **General Education Checklist** (below). The basic pattern is **9 credits of GN, 6 credits each of GA, GH, and GS; and 3 credits of GHW**. You can use the **Substitutions** below to vary this pattern, though the total of 30 credits in the Knowledge Domains remains the same.

Additional Exposure and Experience (9 credits) Select three courses from the **Knowledge Domains** to complete the **General Education Requirements Checklist** or use the substitutions below to satisfy requirements.

ANTH 021 3cr ART H 122 3cr ART H 305 3cr

General Education Requirements Checklist

Natural Science (GN) Course ANTH 216

Humanities (GH) Course ART H 225

Natural Science (GN) Course ANTH 021

Social Sciences (GS) Course ANTH 216

Arts (GA) Course ART H 225

Substitutions (Check the boxes above with your choice of these options. None of these may apply to the single-domain courses listed under the heading “Get Exposure and Experience”)

BUILD language competency by replacing 3 credits in one Knowledge Domain with a world language**

World Language _____ to 3 credits of _____ (GWS, GQ, GN, GA, GH, or GS)

CREATE depth in a General Education Knowledge Domain by substituting a 200-499-level course.

Course _____ Knowledge Area _____

FOCUS on one Knowledge Domain by moving a maximum of 3 credits from another Knowledge Domain.

Move 3 credits of _____ (GA, GH, GN, GS) to 3 credits of _____ (GA, GH, GHW, GN or GS)

**World Language Alternative

Majors that do not require the 12th-credit level of proficiency in a world language: substitute 3 cr in a language at the 12th-credit level (or higher) for 3 cr in any of the General Education Knowledge Domains (with the exception of GHW). E.g., a nursing major could substitute SPAN 003 for 3 cr in the arts (GA).

Majors that do require the 12th-credit level of proficiency in a world language: substitute 3 cr in a language beyond the requirement of the degree program for 3 cr in any General Education Knowledge Domain (with the exception of GHW). E.g., a major in philosophy could substitute GER 201 for 3 cr in natural science (GN).

Students who have demonstrated proficiency in one world language and elect to study another world language: substitute 3 cr of another language at the 12th-credit level of proficiency. E.g., an international student from China who elects to study French can substitute FR 003 for 3 cr in humanities (GH).

Additional University Requirements

United States Cultures (US) _____ **3 credits**

Double count in General Education, major, BA requirement, or elective.

International Cultures (IL) _____ **3 credits**

Double count in General Education, major, BA requirement [except Other Cultures], or as an elective.
Study abroad courses often satisfy this requirement.

Writing Intensive Courses (W, M, X, or Y suffix) _____ **3 credits**

Typically embedded in courses required for a major.

First-Year Experience _____ **0-3 credits**