

Having reviewed the November 1 Draft of the Pathways Common Curriculum Structure, the Queens College community offers the following observations in the form of three parts:

- First, general comments that we hope will contribute to the document, as a whole.
- Second, alternative wording in both the Required and Flexible Core. Our attempt is to clarify and streamline the document.
- Third, explanations for the changes in wording.

These suggestions come largely from faculty who have not only worked together as a community within the college, but also have kept Queens College in a leadership position in General Education reform at the University and in the nation.

I. General Comments

A. Need for an overarching philosophy, a unifying statement of the value of a liberal education.

We recommend that the core structure be preceded by a vision of liberal education that represents the grand history and tradition of liberal education at CUNY. The statement should assert the value of a liberal education for our global student body. As Chancellor Goldstein has said in the preface to *Reclaiming the Public University: Conversations on General & Liberal Education*, “We live in a time when a traditional education, the pursuit of a broad base of knowledge, is more important than ever before. The City University of New York was built on liberal learning... .” (xi)

We suggest that the document articulate a vision of higher education where students will be engaged in a critical/creative exploration of the complex dynamic world in which they live and where they can learn to contribute to the future as productive citizens and leaders.

B. Need for general education program coherence and connectedness, as well as an expansive theory of adult learning

As our accrediting agency, the Middle States Commission has argued that General Education needs to be related to and connected to every major and professional program. A college education must be an integrated whole, promoting interconnectedness, coherence, and purpose. We recommend that the rationale for Pathways take into account the following: *A general education program—developed, owned, and reviewed by the institution’s faculty—should be purposeful, coherent, engaging, and rigorous. (Middle States Characteristics of Excellence, Standard 12, “General Education”).*

In addition, we endorse AAC&U’s statement on liberal learning as a foundation for discussion of learning theory and practical pedagogical assumptions of the new curriculum structure.

“The ability to think, to learn, and to express oneself both rigorously and creatively, the capacity to understand ideas and issues in context, the commitment to live in society, and the yearning for truth are fundamental features of our humanity. In centering education

upon these qualities, liberal learning is society's best investment in our shared future." (Statement on Liberal Learning, 1998)

C. General Education should be a college-wide responsibility.

At Queens College, we have been engaged in a decade long development and implementation of a dynamic general education curriculum. We see General Education as our “college major,” one that engages the faculty across intellectual disciplines and divisions. We urge that the University Pathways project embrace this vital role of both our full and part-time faculty in curriculum development. We recognize that it is our faculty and students who will make the curriculum come to life.

II. The Common Core

A. Writing: 7 credits

Courses must meet all of the following learning outcomes.

Students will be able to:

- Write clearly and coherently in varied formats (essays, papers, reports, etc.) using standard English.
- Read and listen critically, and critique their own writing and that of others.
- Support a thesis with well-reasoned arguments, and communicate effectively across a variety of contexts, purposes, audiences, and media.
- Use appropriate tools to perform research, finding, evaluating, and integrating primary and secondary sources.
- Create original ideas and relate them to the ideas of others, following the conventions of proper attribution and citation.

B. Mathematics: 4 credits

Courses must meet all of the following learning outcomes.

Students will be able to:

- Interpret and draw appropriate inferences from mathematical models, such as formulas, graphs, and tables.
- Use algebraic, numerical, graphical, or statistical methods to draw accurate inferences and solve mathematical problems.
- Represent quantitative problems expressed in natural language in a suitable mathematical format.
- Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
- Apply mathematical methods to problems in the natural and social sciences, technology, or engineering.

C. Science: 4 credits

Courses must meet all the following learning outcomes.

Students will be able to:

- Understand and apply the concepts and methods of a scientific discipline.
- Use scientific methods, including hypothesis development, observation, measurement, and data analysis.
- Carry out scientific investigations in the laboratory or the field.
- Gather, analyze, and interpret data and present it effectively in a laboratory or fieldwork report.
- Follow ethical practices in gathering, assessing, and reporting data.

II. Flexible Common Core: fifteen credits in liberal arts courses, with at least three credits in each of the five areas given below. Flexible Common Core courses must meet all of the following learning outcomes.

Students will be able to:

- Understand and use the concepts and methods of a discipline or interdisciplinary field.
- Gather, interpret, and assess information from various sources, and evaluate arguments critically.
- Solve problems, support conclusions, or defend insights.

A. Global Studies

All courses in this area must meet at least two of the following additional learning outcomes.

Students will be able to:

- Explain the effects of globalization on economies, cultures, or literatures.
- Describe a given event, movement, or process from more than one cultural viewpoint.
- Analyze the historical development of a non-U.S. society.
- Identify and discuss the organizing principles and values of cultural systems.

B. U.S. Studies

A course in this area must meet at least two of the following additional learning outcomes.

Students will be able to:

- Analyze a major theme of U.S. history or literature from any valid social perspective.
- Evaluate how immigration and slavery have shaped the development of the United States.
- Explain the role of the United States in international relations.
- Identify and differentiate among the three branches of government and consider their influence on the development of U.S. democracy.
- Analyze common institutions or patterns of life in contemporary U.S. society and how they influence or are influenced by any form of social differentiation.

C. Visual and Performing Arts

A course in this area must meet at least three of the following additional learning outcomes. Students will be able to:

- Understand how works of music, art, and theatre are created.
- Use basic vocabulary essential to the understanding and discussion of individual arts disciplines.
- Describe the evolution of diverse artistic styles, with emphasis on specific characteristics that can be identified and compared.
- Demonstrate knowledge of the intellectual skills involved in creative processes, as well as the role of interpretive artists.
- Demonstrate how meaning is interpreted and conveyed in the arts, through performance or by creating works of visual or performance art.

D. Individuals and Society.

Courses must meet at least two of the following additional learning outcomes.

Students will be able to:

- Examine how individual experiences and values are affected by social factors.
- Articulate and assess differing ethical views.
- Use information to address social problems ethically and appropriately.
- Understand the impact of science or technology on individuals and society.
- Identify local, national, or global trends and analyze their impact on individual or collective decisions.

E. Language

Courses must meet at least two of the following additional learning outcomes.

Students will be able to:

- Differentiate types of language and appreciate their structures.
- Appreciate what is lost or gained in translations among languages.
- Relate language, thought, and culture.
- Compare natural languages, formal languages, and logic.
- Understand the processes involved in learning languages.

III. Explanations

November 1 Draft

A. English Composition: 7 credits

English composition courses must meet all of the following learning outcomes. A student will be able to:

- Demonstrate critical reading, listening, and analytical skills, including identifying an argument's major assertions and assumptions, and evaluating its supporting evidence.
- Produce coherent texts (such as formal essays, research papers, and reports) using appropriate technology, critique one's own and others' texts, and improve them using standard English, grammar, mechanics, and clear prose.
- Demonstrate research skills using appropriate technology, including finding, evaluating, and synthesizing primary and secondary sources.
- Support a thesis with a well-reasoned argument and communicate persuasively across a variety of contexts, purposes, audiences, and media, using appropriate rhetorical modes and technology.
- Formulate original ideas and integrate them with the ideas of others by employing the conventions of ethical attribution and citation.

Recommended Version

A. Writing: 7 credits

Courses must meet all of the following learning outcomes.

Students will be able to:

- Write clearly and coherently in varied formats (essays, papers, reports, etc.) using standard English.
- Read and listen critically, and critique their own writing and that of others.
- Support a thesis with well-reasoned arguments, and communicate effectively across a variety of contexts, purposes, audiences, and media.
- Use appropriate tools to perform research, finding, evaluating, and integrating primary and secondary sources.
- Create original ideas and relate them to the ideas of others, following the conventions of proper attribution and citation.

Explanations

We recommend making the names of all Common Core areas concise and unambiguous. "Writing" is more concise than "English Composition."

- We recommend differentiating between critical thinking and analytical thinking. It makes both the wording and the objectives themselves clearer.

- “Standard English” encompasses the various elements listed in the original second outcome. By using this term, the text becomes more succinct and clearer.
- “Appropriate tools” may well include various technologies, but omitting traditional research techniques implies that they are no longer relevant. On the other hand, mentioning them would make the outcome even more wordy and unclear. So we recommend the simplification given.
- The term “technology” muddies the intent of the original fourth objective. Computers and the Internet are technologies; blogs and online forums are media; rhetorical modes are communication strategies. Rather than try to explain that the choice of rhetorical mode might depend on the communication medium at hand in the wording of the outcome, it is better to simplify and clarify the wording.
- Minor change of wording: “integrate” implies that one’s thesis must always agree with those of one’s sources. “Relate” makes more sense.

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B. Mathematical and Quantitative Reasoning: 4 credits

Mathematical and quantitative reasoning courses must meet all of the following learning outcomes. A student will be able to:

- Interpret and draw appropriate inferences from mathematical models, such as formulas, graphs, and tables.
- Use algebraic, numerical, graphical, or statistical methods to draw accurate inferences and solve mathematical problems.
- Represent quantitative problems expressed in natural language in a suitable mathematical format.
- Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
- Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.
- Identify and apply logically valid arguments.
- Apply mathematics in a real world context.

Recommendations

B. Mathematics: 4 credits

Courses must meet all of the following learning outcomes.

Students will be able to:

- Interpret and draw appropriate inferences from mathematical models, such as formulas, graphs, and tables.
- Use algebraic, numerical, graphical, or statistical methods to draw accurate inferences and solve mathematical problems.
- Represent quantitative problems expressed in natural language in a suitable mathematical format.
- Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
- Apply mathematical methods to problems in the natural and social sciences, technology, or engineering.

Explanations

As formulated, this area is a course in mathematics, so that's what we recommend for the title. We considered recommending outcomes that would make this into a Quantitative Reasoning course, but it would have made the area too large to be covered in a 4-credit course. Instead, we hope to infuse quantitative and other forms of reasoning across the other areas.

We also recommend three changes to the last three learning objectives:

- Drop the "evaluate solutions" outcome; it is subsumed by the third outcome.
- Drop the reference to logically valid arguments. The main reason for doing so is that requiring proper treatment of "logically valid arguments" would

introduce too much material into the course. If it were required, and honest wording for the outcome would have to be along the lines of, “students will hear logical reasoning mentioned.”

- The recommended language for the last outcome replaces the colloquial phrase, “real-world” with what, we think, is the intended class of problems.

November 1 Draft

C. Life and Physical Sciences: 4 credits

Life and physical science courses must meet all of the following learning outcomes. A student will be able to:

- Identify and apply the fundamental concepts and research methods of a scientific discipline.
- Apply the scientific method to explore natural phenomena, including observation, hypothesis development, experimentation, measurement, data collection, evaluation of evidence, quantitative analysis, and presentation of data.
- Use the tools of a scientific discipline to carry out collaborative investigations in appropriate laboratory settings.
- Obtain, analyze, and interpret data and present it in an effective written laboratory report.
- Apply scientific ethics and unbiased assessment in the reporting of scientific data.
- Retrieve, evaluate, and interpret information from a variety of sources.

Recommended Version

C. Science: 4 credits

Courses must meet all the following learning outcomes.

Students will be able to:

- Understand and apply the concepts and methods of a scientific discipline.
- Use scientific methods, including hypothesis development, observation, measurement, and data analysis.
- Carry out scientific investigations in the laboratory or the field.
- Gather, analyze, and interpret data and present it effectively in a laboratory or fieldwork report.
- Follow ethical practices in gathering, assessing, and reporting data.

Explanations

We recommend simplifying the title. Let the title indicate the area and let the learning outcomes clarify what may be included.

- Simplify and clean up the wording.
- Here, we seem to go counter to our normal practice of reducing the text in order to achieve greater clarity. The problem is that “the scientific method” does not describe how scientists actually go about the business of doing science. We make the area clearer by enumerating the activities students actually need to learn about.
- The typical “lab partner” structure neither reflects how scientists operate nor prepares students for the types of collaboration that scientists

actually do, so we recommend loosening the wording of this outcome to allow for laboratory work that can in fact expose students to a more realistic view of how science is done and, even, to help prepare them for that sort of work.

- We strongly recommend including the “field work” phrase to make explicit the fact that not all “lab work” is actually done inside a laboratory.
- An “effective written laboratory report” is not always the most appropriate way to present the results of laboratory session. Our recommendation allows for the use of a structured laboratory manual for communicating results.
- Finally, we recommend combining the last two outcomes into the single, clear and succinct, one given.

FCC Preamble

November 1 Draft

II. Flexible Common Core: five 3-credit liberal arts courses, with at least one course from each of the four areas and no more than one course in any discipline. All Flexible Common Core courses must meet the following three learning outcomes. A student will be able to:

- Retrieve, evaluate, and interpret information from a variety of sources and points of view.
- Evaluate evidence and arguments critically.
- Produce well-reasoned written or oral arguments using evidence to support conclusions.

Recommended Version

II. Flexible Common Core: fifteen credits in liberal arts courses, with at least three credits in each of the five areas given below. All Flexible Common Core courses must meet all of the following learning outcomes.

Students will be able to:

- Understand and use the concepts and methods of a discipline or interdisciplinary field.
- Gather, interpret, and assess information from various sources, and evaluate arguments critically.
- Solve problems, support conclusions, or defend insights.

Explanations

There are two goals in this preamble: to provide a coherent structure for the curriculum at large, and to ensure that students are exposed to a broad range of disciplines.

We recommend specifying the requirements in terms of credits rather than number of courses because there are a number of one-credit participation courses in the arts

(music ensemble participation, for example) that, in aggregate, would be an excellent way to satisfy Area C.

The recommended set of required outcomes is clearer, and sets the stage for the more coherent structure of the five required areas. The five areas, in turn, are coherent; they provide students with five key perspectives. Three perspectives address different scopes: global, national, and individual. The other two deal with distinguishing human characteristics: the arts and language.

In general, we recommend avoiding a focus on disciplines in defining the Flexible Common Core, for several reasons:

- CUNYfirst identifies three levels of academic structure: Academic Organization, Academic Unit, and Subject. At Queens, a subject is a discipline, a unit is a department, and an organization is a division (defined as a group of departments that report to a particular dean.) One department can offer courses in multiple disciplines. So the attempt to ensure breadth by limiting the number of “disciplines” is going to lead to intractable problems of definition.
- Dealing with the breadth issue at the discipline/subject level does not address the problem we have identified at Queens: the November 1 draft structure would allow a student to complete all the FCC requirements from within the Arts and Humanities division without ever taking any courses in the Social Sciences division, *and vice versa*.
- A discipline-centric approach perseverates “turf boundaries” that are orthogonal to the students’ educational best interests.
- Some of the best general education courses being developed do not follow disciplinary boundaries. That is, it is not a good idea to make it hard for well-conceived interdisciplinary courses to be used for general education.

We note that a weakening phrase, such as “such as” when introducing a discipline list could eliminate many of the difficulties above. But then the list becomes non-normative. The intent should be made clear by the wording of the learning outcomes.

FCC Area A

November 1 Draft

A. World Cultures

A course in this area must meet at least three of the following additional learning outcomes. A student will be able to:

- Identify and apply the fundamental concepts and research methods of a discipline or interdisciplinary field exploring world cultures, including, but not limited to, anthropology, economics, foreign languages (nonduplicative of previous language acquisition), history, political science, and world literature.
- Analyze the concept of culture and global cultural diversity and describe any given event or process from more than one cultural viewpoint.
- Analyze the historical development of a non-U.S. society.
- Analyze the significance of a major movement that has shaped the world's societies.
- Identify and discuss the role that race, ethnicity, class, gender, or belief plays in cultural systems.
- Speak, read, and write a language and use the conceptual skills to appreciate and respond to cultures other than one's own.

Recommended Version

A. Global Studies

All courses in this area must meet at least two of the following additional learning outcomes.

Students will be able to:

- Explain the effects of globalization on economies, cultures, or literatures.
- Describe a given event, movement, or process from more than one cultural viewpoint.
- Analyze the historical development of a non-U.S. society.
- Identify and discuss the organizing principles and values of cultural systems.

Explanations

We recommend changing the title to emphasize the analytical focus, rather than experiential nature, that this area should address.

- The first objective in the draft has been elevated to the preamble covering all FCC areas.
- The wording we recommend allows “cultural diversity,” but also allows social processes to satisfy the outcome.
- The wording of our fourth outcome clarifies the intent of the fifth item in the draft, yet is conceptually more general.

- Eliminating the last outcome from the draft is predicated on adding a fifth area (See Area E below.) One semester studying a foreign language is not an effective way to expand or deepen one's understanding of other cultures. Furthermore, there are many practical problems with incorporating a foreign language requirement as a learning outcome in this area, notably that students come to the university with widely varying degrees of foreign language proficiency, making it very difficult to "place" students with respect to this outcome. Our fifth required area de-couples language from culture, which is a much stronger academic position.

FCC Area B

November 1 Draft

B. U.S. Experience in its Diversity

A course in this area must meet at least three of the following additional learning outcomes. A student will be able to:

- Identify and apply the fundamental concepts and research methods of a discipline or interdisciplinary field exploring the U.S. experience in its diversity, including, but not limited to, anthropology, economics, history, political science, sociology, and U.S. literature.
- Analyze the major themes of U.S. history from different social, economic, demographic, cultural, or political perspectives.
- Evaluate how immigration and slavery have shaped the development of the United States.
- Explain the role of the United States in international relations and how this role has influenced the country and the rest of the world.
- Identify and differentiate among the legislative, judicial, and executive branches of government and analyze their influence on the development of U.S. democracy.
- Analyze common institutions or patterns of life in contemporary U.S. society and how they influence or are influenced by race, ethnicity, class, gender, sexual orientation, or other forms of social differentiation.

Recommended Version

B. U.S. Studies

A course in this area must meet at least two of the following additional learning outcomes.

Students will be able to:

- Analyze a major theme of U.S. history or literature from any valid social perspective.
- Evaluate how immigration and slavery have shaped the development of the United States.
- Explain the role of the United States in international relations.
- Identify and differentiate among the three branches of government and consider their influence on the development of U.S. democracy.
- Analyze common institutions or patterns of life in contemporary U.S. society and how they influence or are influenced by any form of social differentiation.

Explanations

We recommend changing the name of this area to make it clearer and simpler; to emphasize the analytic focus of the area; and to parallel the naming for Area A.

We recommend eliminating the first outcome (a) because it now duplicates one of the common requirements for the FCC and (b) to eliminate the discipline-centric problems mentioned in Area A.

Minor wording changes clarify and simplify the language, or allow more flexibility in course content without lessening the intent of the outcomes.

FCC Area C

November 1 Draft

C. Creative Expression

A course in this area must meet at least three of the following additional learning outcomes. A student will be able to:

- Identify and apply the fundamental concepts and research methods of a discipline or interdisciplinary field exploring creative expression, including, but not limited to, communications, creative writing, media arts, music, and theater.
- Analyze how arts from diverse cultures of the past serve as a foundation for those of the present and describe the significance of works of art in the societies that created them.
- Articulate how meaning is created in the arts or communications and how experience is interpreted and conveyed.
- Demonstrate knowledge of the skills involved in the creative process.
- Use appropriate technologies to conduct research and to communicate.

Recommended Version

C. Visual and Performing Arts

A course in this area must meet at least three of the following additional learning outcomes. Students will be able to:

- Understand how works of music, art, and theatre are created.
- Use basic vocabulary essential to the understanding and discussion of individual arts disciplines.
- Describe the evolution of diverse artistic styles, with emphasis on specific characteristics that can be identified and compared.
- Demonstrate knowledge of the intellectual skills involved in creative processes, as well as the role of interpretive artists.
- Demonstrate how meaning is interpreted and conveyed in the arts through performance in a musical, dance, or theatrical production, or by creating works of visual or performance art.

Explanations

New York City is an international center for the visual and performing arts. The city's cultural strengths should be reflected in the education of its university's students.

The title we recommend uses terms in current use, avoiding negative connotations associated with the draft version and other terms not currently in use. The recommended title also makes it easier to establish the academic focus of studies in this area.

- The first outcome makes it clear that creativity is work, and introduces students to how that work actually takes place.
- The arts assign specific meanings to terms that could easily seem amorphous to students with no training. It is important for students to learn that terminology matters, and to develop basic competence with that terminology.
- The third outcome is a restatement of the second outcome in the draft.
- The fourth outcome parallels the fourth outcome in the draft.
- The fifth outcome is important in two ways. (1) It introduces the concept of meaning, opening the opportunity to relate this Area to Area E (“the language of dance,” for example). (2) It allows active participation in the arts to be incorporated into the area.

FCC Area D

November 1 Draft

D. Individual and Society

A course in this area must meet at least three of the following additional learning outcomes. A student will be able to:

- Identify and apply the fundamental concepts and research methods of a discipline or interdisciplinary field exploring the relationship between the individual and society, including, but not limited to, anthropology, computer science, philosophy, psychology, religion, and sociology.
- Examine how an individual's place in society affects experiences, values, and choices.
- Articulate and assess ethical views and their underlying premises.
- Articulate ethical uses of data and other information resources to respond to problems and questions.
- Analyze the transformational impact of science or technology on the individual and society.
- Identify, analyze, and engage with local, national, or global trends and analyze their impact on individual or collective decision-making.

Recommended Version

D. Individuals and Society.

Courses must meet at least two of the following additional learning outcomes. Students will be able to:

- Examine how individual experiences and values are affected by social factors.
- Articulate and assess differing ethical views.
- Use information to address social problems ethically and appropriately.
- Understand the impact of science or technology on individuals and society.
- Identify local, national, or global trends and analyze their impact on individual or collective decisions.

Explanation

We assume the original name for this area was a typographical error.

Our recommendations parallel the original outcomes. (Again, the first outcome has been subsumed by the set of global outcomes for all FCC areas.)

Our wording is clearer, more direct, and eliminates ambiguous terms, like "place in society," which has radically different connotations in India (caste), England (lineage), and the United States (race).

FCC Area E

Recommended Fifth Area

E. Language

Courses must meet at least two of the following additional learning outcomes.

Students will be able to:

- Differentiate types of language and appreciate their structures.
- Appreciate what is lost or gained in translations among languages.
- Relate language, thought, and culture.
- Compare natural languages, formal languages, and logic.
- Understand the processes involved in learning languages.

Explanations

Our intent is to introduce language as an object of study, one that illuminates issues of thought, culture, and intelligence. Because of the city's cultural and linguistic diversity, CUNY is especially well positioned to address this issue.

By raising language to an area in its own right, students will gain a perspective on such otherwise amorphous topics as "critical thinking," "informed decision making," "cultural norms," and even "creativity." Language underlies notions of knowledge and understanding. Rather than hope that these outcomes will emerge from the process of taking courses in the other areas of the required and flexible common core, this area brings them to the fore and addresses them directly.

We see this as an enabling requirement: courses from many disciplines can be structured to satisfy it. The possibility of introducing cross-disciplinary courses to this area is an exciting one, but not required.