Core Renewal
What we have been hearing: Questions and Answers
August 19, 2013

Question: Asking freshmen to take the 6-credit Enduring Question and Complex Problem courses (total of 12 credits across 2 semesters) will be detrimental to serious STEM students who need to take a heavy load of science and math courses freshman year, including labs. Does the core proposal consider this issue?

Answer: The renewed Core does not increase the overall size of the Core, but it does require that freshmen take a 6-credit course each semester and this may create some constraints for students wishing to take a heavy load of math and science courses. This question raises important issues that the core team has investigated. Tom Chiles, Chair of the Biology Department, and Gail Kineke, Chair of Earth and Environmental Sciences were members of the BC Core team and worked to make sure that STEM majors would be able to fulfill the requirements of the renewed Core. We all believe that the benefit to most students (especially those who aren’t majoring in the sciences) from these proposed new courses outweighs the inconvenience to some students. However, we are committed to making sure that the renewed Core does not impede students pursuing science majors.

• We will have the Associate Dean of the Core and/or the CRC chair available at every summer registration session to work with advisors from STEM departments to help any students for whom the Core poses scheduling problems.

• We will offer a Complex Problem course sophomore year, so STEM students (and other students with crowded schedules during freshman year) could defer taking that course until then. They could also put off first-year writing until sophomore year (the English department has agreed to this).

• Ultimately, if the Enduring Question and Complex Problem courses are too burdensome for serious STEM students, we could exempt them from the Communities of Inquiry (they would have to fulfill their Core requirements by taking Foundation and Exploration courses).

However, many serious science students are currently enrolled in the A&S Honors Program and taking 12 credits of Core in both freshman and sophomore years, more than what is required by the renewed Core. There are currently 57 students from the classes of 2014-2016 enrolled in the Honors Program and majoring in Chemistry, Physics, or Mathematics: 13 Chemistry majors, 16 Physics majors, 28 Mathematics majors (both BS and BA). Of students in the class of 2017 enrolled in the Honors Program, 7 listed Chemistry as their proposed major, 6 Physics, and 7 Mathematics. Currently, there are also STEM double majors enrolled in the Honors
Program: 1 Biology and Physics, 1 Chemistry and Physics, 1 Biology and Mathematics, 2 Physics and Mathematics. These students have chosen to participate in the Honors Program while pursuing STEM majors.

**Question:** Will the renewed Core reduce enrollments in Perspectives and PULSE? This would be a detriment to our students.

**Answer:** The BC Core team agrees with faculty who believe Perspectives and PULSE are important and distinctive components of the undergraduate experience at Boston College. We are committed to increasing enrollments in Perspectives and PULSE if those programs agree to do so, and they will remain central to the Boston College Core. We are working with Brian Braman and Dave McMenamin and are learning from those programs as we formulate the Question and Problem courses.

We have worked with a group of faculty from the Philosophy department to identify several steps that we are taking to make sure that both Perspectives and PULSE remain strong:

- Perspectives will fulfill both Enduring Questions and Complex Problems.
- PULSE taken in freshman year will fulfill both Enduring Questions and Complex Problems.
- PULSE taken in sophomore year will fulfill Theology and Philosophy requirements as Exploration courses (as it does now)
- PULSE and Perspectives students will have the option of taking a Complex Problem in sophomore year (perhaps specifically following up on themes from those courses) if they wish, but will not be required to.
- Perspectives is likely to be seen by freshmen as an attractive way to fulfill Complex Problems and Enduring Questions because it will not impact student schedules as much as having to take two different linked courses (at different times) for Enduring Questions.

**Question:** Will the renewed Core prevent students from gaining a foundation in Theology (which almost all students are lacking when they enter BC)?

**Answer:** To ensure that this doesn’t happen, the Theology Department can determine how they want students to fulfill the Theology requirement in the renewed Core. If they wish to keep things as they are, with students fulfilling the requirement through Perspectives, PULSE, Introduction to Christian Theology I and II, Religious Quest I and II, Biblical Heritage I and II, or Introduction to Catholicism I and II, that will be the department’s prerogative.
The CRC would be eager to work with both Philosophy and Theology to renew Perspectives. We would be happy to have Theology faculty participate in Enduring Question or Complex Problem Courses and to experiment with a one-semester Foundation course for students who take Theology in a Question or Problem.

If Theology does not participate in the Enduring Question and Complex Problem courses, we are committed to inviting faculty from that department to give evening lectures to students in those courses so that important theological perspectives are included.

**Question:** Freshmen are unable to handle interdisciplinary courses when they have not yet gained a grounding in the disciplines. Aren't such courses better delayed until Senior year?

**Answer:** It is important to understand what we mean to achieve in these proposed courses. “Interdisciplinary course” can mean many different things and we are using “interdisciplinary” in a particular way. Freshmen in these courses are not expected to achieve mastery of disciplinary knowledge in order to do original research or solve complex problems. Instead, they are introduced to a complicated problem that requires expertise from multiple disciplines in order to be understood. They are engaged by the problem and are then introduced to two disciplines as they learn how each discipline differently approaches and understands the problem.

We believe that requiring two intellectually rigorous courses that are designed for freshmen during their first year at Boston College will begin to alter student culture on campus. This requirement will convey to students from the start that we expect serious commitment to academic pursuits. We hope that providing interdisciplinary learning experiences centered on the exploration of important questions and problems will unlock students’ intellectual curiosity, introduce them to the importance of disciplinary expertise, and shape their four years at Boston College.

Each Enduring Question Course is not, in itself, interdisciplinary. Instead, students take two linked courses taught by faculty in different disciplines in conversation with each other. So each discipline can be introduced, while students are engaged by the important common questions raised in the courses and are pushed intellectually to compare and contrast the two disciplines. Understanding of each discipline is enhanced by the dialogue between them.

Complex Problems are interdisciplinary courses team-taught by faculty from two disciplines. There are successful freshman programs that offer interdisciplinary courses at many institutions. Our own PULSE and Perspectives courses are interdisciplinary, although not team-taught.
Some examples of interdisciplinary freshman Core programs (some of these are Honors or elective programs, some are required of all freshmen):

- Barnard College Interdisciplinary first-year seminar: [http://firstyear.barnard.edu/](http://firstyear.barnard.edu/)
- Baylor Interdisciplinary Core: [http://www.baylor.edu/BIC/](http://www.baylor.edu/BIC/)
- Columbia University (like Chicago, only some courses are interdisciplinary. The introductory science course is an example): [http://www.college.columbia.edu/core/classes/fos.php](http://www.college.columbia.edu/core/classes/fos.php)
- Duke University, first-year Focus program: [http://interdisciplinary.duke.edu/education/focus-program](http://interdisciplinary.duke.edu/education/focus-program)
- Scripps College Core Curriculum in Interdisciplinary Humanities: [http://www.scrippscollege.edu/academics/core/](http://www.scrippscollege.edu/academics/core/)
- UCLA Freshman Clusters program: [http://www.ugeducation.ucla.edu/article_freshmancluster.html](http://www.ugeducation.ucla.edu/article_freshmancluster.html)
- University of Chicago (not completely interdisciplinary, but includes “integrated, often interdisciplinary, sequences”): [http://collegecatalog.uchicago.edu/thecollege/thecurriculum/](http://collegecatalog.uchicago.edu/thecollege/thecurriculum/)

We understand that the Core Renewal Committee will need to provide support to help faculty find teaching partners for these courses and to develop them. We will offer mechanisms to help faculty identify teaching partners, will bring in faculty from programs in other universities that offer interdisciplinary and team-taught courses, we will offer summer funding so that faculty can attend workshops on team-teaching and course development, and will provide ongoing support to help faculty deal with issues that arise.

**Question:** Aren’t the Complex Problem courses unsound pedagogically? They are too large, and the labs remain poorly defined and seem too difficult to implement.

**Answer:** Large Core courses are a necessity at Boston College, given the ratio of faculty to students. In the 2012-2013 academic year there were 24 large courses in the Core (courses designed to enroll 200 students or more) offered by the departments of Chemistry, Economics, Psychology, History, and Earth and Environmental Sciences.
The good news is that many of these large courses are extremely successful. We intend to learn from successful large courses to use technology and other innovative pedagogies to make these courses as successful as possible.

The labs grow out of the concept of problem-based learning, which is being used very successfully in a number of universities:

- University of California at Irvine: [http://www.pbl.uci.edu/whatispbl.html](http://www.pbl.uci.edu/whatispbl.html)
- University of Delaware: [http://www.udel.edu/inst/](http://www.udel.edu/inst/)
- Stanford University, [http://ldt.stanford.edu/~jeepark/jeepark+portfolio/PBL/whatis.htm](http://ldt.stanford.edu/~jeepark/jeepark+portfolio/PBL/whatis.htm)

See also an issue of the Stanford teaching newsletter on problem-based learning, vol 11, no. 1: [https://teachingcommons.stanford.edu/resources/teaching-resources/speaking-teaching-newsletter-archive](https://teachingcommons.stanford.edu/resources/teaching-resources/speaking-teaching-newsletter-archive)

Some disciplines, like Biology, are increasingly recognizing that problem-based learning is a more effective way to teach students than simply lecturing to them (see article in *The American Biology Teacher*: [http://www.jstor.org/stable/4451688](http://www.jstor.org/stable/4451688)).

We will have to put a lot of work into learning how to organize these labs effectively. We will bring in faculty from other universities who are successfully using problem-based labs to offer workshops. We will bring BC faculty together to work with these experienced faculty from elsewhere and help them to develop templates for the Complex Problem labs.

Graduate students and postdocs who lead the labs will need to be trained (in a special summer program) and will need to have effective mentoring from faculty teaching the courses. We will pilot a mentoring program to provide models to faculty who want them.

For some courses as appropriate, the labs will also function as more traditional discussion sections.

**Question:** Will faculty who teach Complex Problems and Enduring Questions be forced to teach according to a particular ideological agenda?

**Answer:** We agree that this question raises a very important issue and we want to emphasize that the renewed Core is grounded in respect for academic freedom and
will not require any faculty member to teach any particular political, social, or religious agenda. Enduring Questions and Complex Problems can (and indeed must be) approached from a range of perspectives. By definition, these will be Questions and Problems that have no single answer or solution.

**Question:** What will the partnership with Mission and Ministry and Student Affairs involve? Will reflection be banned from the classroom and moved to the margins of the Core? Will faculty be forced to include reflection in their classes?

**Answer:** The BC Core team co-chairs have had several meetings with Mission and Ministry and we are very excited about the possibilities of collaboration with them and with Student Affairs. As we work out this facet of the renewed Core, we will hold Town Meetings with faculty to seek feedback on plans as they develop. We have discussed the possibility of having representatives from Mission and Ministry available to lead some evening meetings of the Enduring Question and Complex Problem courses, where they could introduce students to techniques of reflection and could make sure they are aware of opportunities such as retreats offered by Mission and Ministry and Student Affairs. Faculty teaching those courses might be offered a choice of evening programs on reflection including options involving the AHANA office, the Career Center, as well as Mission and Ministry, Student Affairs, etc. We have also discussed optional retreats, perhaps centered on career possibilities linked to Complex Problems, or discussion of career related to issues raised by Enduring Questions. We will be looking to faculty for suggestions as we develop these programs.

Faculty who are already including personal reflection in their classes are certainly encouraged to continue doing so. We may ask some of them to offer workshops to faculty who do not currently do so but wish to incorporate personal reflection into Core teaching. However, faculty will be neither required to nor banned from incorporating reflection into teaching.

**Question:** The new course guidelines are too loose. It isn’t clear how Core courses will differ from electives. Will they?

**Answer:** Currently, the Core lists six characteristics that all Core courses ostensibly incorporate. In practice, few courses include all six, and many only include one or two. Decisions about approval of Core courses are made based on a series of discipline-specific guidelines, which are quite different from the published characteristics.

The renewed Core will ask departments and disciplines to take the guidelines more seriously. Enduring Question and Complex Problem courses will each incorporate six characteristics, and we will work out discipline-specific versions of each characteristic so that it will be clear how ALL Communities of Inquiry courses follow Core guidelines.
Foundation and Exploration courses each require four characteristics, and then ask that courses include another three, chosen from a list of six options. Offering options means that disciplines can choose a list of seven characteristics for their Core offerings that fit with the discipline. Discipline-specific requirements will be developed in cooperation with departments. Departments will also be asked to explain how Core offerings differ from their elective offerings. All of these discipline-specific guidelines will be available on the Core website.

The CRC will make sure that all course courses follow six (in the case of Enduring Problem and Complex Question courses) or seven (in the case of Foundation and Exploration courses) guidelines. We will be able to ensure that all Core courses follow Core guidelines, and will know how many courses choose which of the optional choices. The CRC will work to make sure that all of the options are available across the range of Foundation and Exploration offerings.

**Question; Aren’t there too many unanswered questions in the core proposal?** Too much of the renewed Core is left unspecified—for example, the discipline-specific course requirements will be worked out by the CRC in consultation with departments and disciplines. The proposal also talks about “ongoing innovation” and the possibility that the new freshman courses will change as pilots reveal what works and what doesn’t work.

The existing (1991) Core also left details unspecified and they were worked out by the UCDC. For example, the UCDC formulated discipline-specific guidelines that were not included in the initial document and that are not available on their website. The renewed Core document lists general characteristics for Core courses and acknowledges up front that work on discipline-specific guidelines needs to be done in cooperation with those who have expertise in those disciplines, and this work will be done openly and transparently. Discipline-specific guidelines will be based on the general characteristics in the Core document and will be posted on the Core website as they are formulated. We will hold a Town Hall meeting as we begin the work of formulating these guidelines and will work closely with departments and groups of departments to determine what they are.

Although more specificity now might provide a sense of security and reduce uncertainty, the reality is that because of differences among disciplines, if the Core team were to create specific guidelines now without consulting departments, they would ultimately be ignored or “worked around” in an unsystematic manner, to the detriment of the core and the students. Our proposal requires ongoing engagement to create and continuously review the specific guidelines for departments. This will be done regularly and in a visible way, creating a more robust core for faculty and students.
Similarly, as we pilot Enduring Question and Complex Problem courses, we will learn from the pilots and will alter the courses accordingly. This will also be done openly and transparently. We will make information available to faculty about what has worked and what has not worked in the initial pilots and will hold open Town Hall discussions of proposed changes. We feel that we’re more likely to offer truly excellent courses if we’re open to experimentation, and to learning from pilots.

**Question: Will Boston College students still get the foundational knowledge that they need in the renewed Core?**

**Answer:** One of the three pillars found in the new Vision of the renewed Core is a promise that students will gain “enduring foundations.” The renewed Core will allow the Core Renewal Committee to work with departments to develop more specific definitions of what constitute foundational knowledge in each discipline, and will be able to make sure that Enduring Question, Complex Problem, and Foundation courses adhere to those new guidelines. The CRC can also make sure that each department requires that students have attained a basic foundation of knowledge before moving on to Exploration courses. Different departments will do this in different ways, but all will be required to explain what necessary foundational knowledge is.

The renewed Core will let us develop a much clearer and more detailed set of discipline-specific guidelines than currently exists in the 1991 Core. We believe that the renewed Core will allow us to explain more clearly to students why foundational knowledge is important in order to address compelling problems and questions.

**Question: Isn’t the Core Renewal Committee too large to be effective and too powerful?**

**Answer:** The Core Renewal Committee has no more power than the current University Core Development Committee, and its deliberations will be more transparent. It is larger than the UCDC because we feel we need input from elected faculty (a majority of the committee) as well as from the associate dean for the Core, the director of the Academic Advising Center (because advising is so crucial to a successful Core) and from members of the ILA who represent the three disciplinary areas (Natural Sciences, Social Sciences, Humanities). The larger size is also designed to foster interdisciplinary cooperation.

The current elected members of the UCDC can move to the CRC and remain on the committee until their terms run out. New members can be elected to the CRC. We need to maintain elected representation of the three disciplinary areas within A&S as well as from CSON, CSOM, and LSOE.

We believe that once detailed guidelines are in place, routine course approval can be streamlined and made more efficient. The first business of the CRC will be to review
the course approval process and to work out a process for developing new disciplinary guidelines.

The CRC will maintain a website on which all guidelines and decisions can be found. The CRC chair will continue to hold regular Town Hall meetings (with deans Quigley and Boynton).