2015-16 Core Curriculum Assessment

Rutgers – New Brunswick Core Curriculum
Student Learning Outcomes Assessment Report, 2015-16

Executive Summary:

Academic Year 2015-16 was the fifth year of the Rutgers – New Brunswick Core Curriculum. This year was notable for the entry of students from the School of Environmental and Biological Sciences (SEBS) to the Core. Now, all students matriculating in SEBS, the School of Arts and Sciences (SAS), and the New Brunswick Business School participate in the Core.

The Core Requirements Committee (CRC) requested reports from 210 of the 365 Core courses offered in Fall 2015 and 217 of the 390 Core courses offered in Spring 2016. We received results from these departments for 375 courses (88% response rate), with combined enrollments of approximately 59,820; Core assessment results were voluntarily filed by other departments for an additional 53 courses, with combined enrollments in all courses reporting Core goals assessment of 63,130. 65% of the submitted reports included plans to make changes to improve student learning or methods to improve the measurement of student learning.

To ease the administrative burden of reporting Core assessment results, an on-line reporting system was developed and introduced Fall 2015. The on-line form requests the same information as the previously used paper form but is prepopulated with the certified learning goals for each course. The on-line system allows for the generation of summary reports by Core goal or department and will facilitate the archiving of data going forward.

The CRC implemented a policy in Fall 2015 to review courses previously certified for the Core. For AY 2015-16, the CRC considered two sets of courses: courses that had not been offered in the past three academic years, and large enrollment courses (100+ per semester) with grade distributions that were out of line with expectations for entry-level general education courses. These reviews were conducted in consultation with the departments offering the courses. Following these reviews, the CRC decided to retire nine courses from the Core Curriculum effective Fall 2016.

An external review of the Core Curriculum was initiated by a resolution passed by the SAS faculty in Spring 2015. A committee of eight, two from each disciplinary area of SAS, was elected by the SAS faculty and charged by Executive Dean Peter March to gather data and evaluate the philosophy as well as the operation of the Core. During Spring 2016, the Core Evaluation Committee (CEC) met with the various constituencies including students, faculty, CRC leadership, and SAS Office of Academic Services personnel. The CEC plans to continue its review in Fall 2016 and submit a report to Executive Dean March by December 2016.

Assessment of the New Brunswick Core Curriculum 2015-16

(This part of the report follows the checklist format of the University Executive Council on Assessment.)

Following the 2006 adoption of the "Transformation of Undergraduate Education Task Force Report" recommending the reorganization of undergraduate education and the establishment of the School of Arts and Sciences (SAS), a faculty committee began a year and half of deliberation resulting in an innovative new goal-based Core Curriculum. The combined SAS and professional school-based faculty adopted the Core in the Spring of 2008 to go into effect with students entering in the Fall 2011 and beyond. Undergraduate students matriculating in the School of Arts and Sciences and the New Brunswick Business School, including those planning to complete majors offered by the Edward J. Bloustein School of Planning and Public Policy, the School of Communication and Information, the School of Management and Labor Relations, the School of Social Work, the Mason Gross School of the Arts BA programs, and the five-year Graduate School of Education program, participate in the Core Curriculum. These Schools are represented (in rotation) on the Core Requirements Committee (CRC), as is the School of Environmental and Biological Sciences, which as of AY 2015-16 requires a modified Core Curriculum for its majors.[1] All of these Schools offer courses certified for the Core, as do the SAS departments.[2]

Yes	Learning Goals o Clearly defined o Publicly posted – provide url **http://sasoue.rutgers.edu/core/core-learning-goals** o Aligned in hierarchy of learning goals o University level o Decanal Unit level o Program/department level o Course level
Yes	Course Syllabi/synopsis/expanded description includes appropriate learning goals
Yes	Identifies where or how the goals are met

Under the Core Curriculum, students meet 14 requirements based in 28 learning goals clustered in three areas. The Core is structured to ensure that all students will meet a minimum of 17 learning outcome goals that the faculty have identified as forming the core of a modern liberal arts and sciences education at a leading 21st Century public research university. These goals are publicly posted in multiple places as the goals *themselves* define the Core Curriculum requirements students must meet. The Core is described in a widely-circulated brochure available as a pdf on various web pages [http://sasoue.rutgers.edu/docman-docs/doc_download/24-core-curriculum-brochure]. A summary of the Core goals is available here and in **Appendix A**. Unlike many of our peers whose general education requirements are difficult to find on their public web pages, links to the Core goals are prominent on the main SAS Office of Undergraduate Education web page and the Core is highlighted in the scrolling banner on the main SAS undergraduate Office of Academic Services web page. The Core goals, and the courses that satisfy each of these requirements, are on the Academic Services web page and the Core

[1] School of Environmental and Biological Sciences Core Curriculum, adopted 2013-14: https://sebs.rutgers.edu/core/

[2] Through AY 2015-16 students entering as Engineering or Pharmacy students have not been required to complete the Core Curriculum, but the mandatory curriculums at each of these Schools include some courses certified for the Core Curriculum. Hence, every New Brunswick undergraduate takes courses that have been certified for the Core: 01:355:101 Expository Writing; specified mathematics courses; and specified natural science courses. Transfer students are required to take 21st C Challenges courses [21C] and a Writing and Communication with revision course [WCR] at Rutgers NB. UMDNJ legacy schools have not been integrated into the New Brunswick undergraduate program at this time.

goals are part of the text students see in the Schedule of Classes and Degree Navigator, as they chart their progress toward completing their degrees. As illustrated in **Appendix B[3],** these Core goals are aligned with the University learning goals and they *are* the general education learning goals for the undergraduate programs in each of the Schools listed above. And, as discussed below, each course certified for the Core must include the Core goals on the syllabus. Codes for the Core goal categories are also in the Web Registration system and Course Schedule Planner that students use for registration.

Yes	Assessment Plan, Structure, and Process: Describes the assessment structure and the process by which the assessment plan was developed and shared within the unit o Efficient o Effective o Sustainable o Reviewed annually
Yes	Assessment Tools/Measures o Includes some direct measures o Tools/measures appropriate to goals o Designed to produce reliable results that can be used for program improvement
Yes	Benchmarks/Standards o Describes the process used define standards, targets, and relevant peer and historical comparisons o Articulates appropriately rigorous standards for judging student achievement of learning goals and identifies unacceptable levels of performance for all learning goals

The Core Requirements Committee (CRC) oversees the Core.[4] The CRC is made up of faculty and staff representatives from the various Schools that use the Core and the SAS Associate Dean for Undergraduate Education. The CRC is staffed by the SAS Assistant Dean for Assessment who collates all assessment reports and provides assessment assistance to faculty and departments. The CRC generally meets every three weeks to review petitions to add courses to the list of those certified for the Core, and otherwise make Core Curriculum policy.

Assessment is an integral part of this Core Curriculum. The Core Requirements Committee requires *all* courses certified for the Core to include a clear statement of the Core goal(s) on the syllabus and a plan for assessing student achievement of the specified Core learning goal(s). These assessment plans are reviewed by the CRC before a course is recommended to the full faculty for certification as meeting any Core Curriculum goal(s).

The primary method of assessment employed in Core courses involves scoring an embedded assignment or exam question(s) using Core goal rubrics the CRC has developed as the preferred "best practice" assessment option. The full process and rubrics are available on the School of Arts and Sciences (SAS) web site at http://sasoue.rutgers.edu/core/core-assessment, and detailed in the *Faculty Guide to Core Certification*. All the Core rubrics are available on the SAS webpage; the 21st Century Challenge rubrics are provided in **Appendix C** by way of example. Faculty are also free to adopt other methods of assessing student achievement of Core learning goals. For example, some faculty use pre

[3] See original document online at http://sas.rutgers.edu/component/docman/doc_download/549-core-sas-a-university-learning-goals-aligned

[4] See page 15 for Core Requirements Committee (CRC) members, AY 2015-16

and post tests and report the number of students who have achieve the goals at an outstanding, good, satisfactory, and unsatisfactory level.

The CRC is aware that some of our colleagues as well as some observers of higher education more broadly think of general education as something to be assessed in totality as students graduate. We understand the desire to measure the value added of a college education and the challenges inferring this from course-based evaluations. However, the common tool for evaluating student competencies in general skills, the nationally standardized test, has recently come under more scrutiny. The primary criticism is that the results of these tests are difficult to use to develop plans for revising courses and curricula to improve student learning. The problem is not just one of identifying where in the curriculum a shortcoming has arisen, but also one of accountability. As Tanya Furman argues in a recent article in The Journal of General Education, "the summative and aggregated data provide an institutional snapshot but do not foster the taking of responsibility for student intellectual growth."[5]

A recent survey of AAC&U member institutions finds a move away from standardized tests to assess general education. Among schools that assess cumulative learning outcomes for general education, the percentage using standardized national tests of general skills fell from 49% in 2008 to 38% in 2015. Over the same period, there was a marked increase in the use of rubrics applied to examples of student work (from 77% in 2008 to 91% in 2015).[6] In announcing the 2016 report, AAC&U President Carol Geary Schneider praised this trend, stating:

> The assessment shift from tests that were disconnected by design from students' course of study toward assessment tools that are anchored directly in students' assignments across-the-curriculum is a huge cultural shift. Assessment is poised, at long last, to become a tool for learning improvement, and not just a compliance exercise whose results leave educators mystified rather than usefully informed.[7]

The Rutgers-New Brunswick model of assessment of student learning through authentic, embedded, direct assessments implemented in courses across the Core Curriculum reflects this cultural shift, and a strong consensus nationally about best practices in effective general education programs.

As assessment is built into the structure of Core courses -- generally rubric-based scoring of embedded assignments, as noted -- the CRC expects these assessments will be conducted every time that the Core course is offered. The CRC asks departments for complete assessment reports on all Core certified courses at three-year intervals, such that each year the CRC reviews assessment reports from a third of the departments.[8] These assessment reports are intended to:

- compile systematic evidence that students are achieving the Core Curriculum goals;

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[5] Furman, Tanya (2013). Assessment of General Education. *The Journal of General Education* 62(2), page 133. Project MUSE database (accessed May 16, 2016). http://muse.jhu.edu/article/520321 | DOI: 10.1353/jge.2013.0020 | pdf: http://muse.jhu.edu/article/520321/pdf See also, NILOA leaders' recent book, Kuh, G.D., Ikenberry, S.O., Janowski, N.A., Cain, T.R., Ewell, P.T., Hutchings, P. & Kinzie, J. (2015). *Using evidence of student learning to improve higher education*. San Francisco, CA: Jossey-Bass.

[6] Association of American Colleges & Universities (2016). Trends in Learning Outcomes Assessment: Key Findings from a Survey among Administrators at AAC&U Member Institutions. *National Survey of AAC&U Member Chief Academic Officers (2015): Report #3,* conducted by Hart Research Associates, page 7. pdf: http://www.aacu.org/sites/default/files/files/LEAP/2015_Survey_Report3.pdf

[7] AAC&U, February 17, 2016 Press Release: http://www.aacu.org/press/press-releases/higher-education-learning-outcomes-assessment-movement-moves-away-standardized

[8] The CRC also accepts results from any other Core courses not up in the 3-year cycle that wish to report, and some do so every semester. The data from those courses are included with the data from the 3-year reports. Reports are solicited from all the over 50 departments/programs offering Core courses across NB Schools.

- identify gaps between the aspirations of the courses and actual student achievement; and
- provide a trigger for modification or department review of the certified courses and their appropriateness for the Core.

After surveying the literature on assessment and best practices at peer institutions, we have benchmarked Core goal outcomes with an expectation that at least two-thirds of students will meet the assessed goal at the satisfactory or better level. *In fact, our faculty members have responded to scores well above this benchmark with reforms designed to improve student learning in Core courses.* The CRC retains an annually-updated catalog of these reforms.

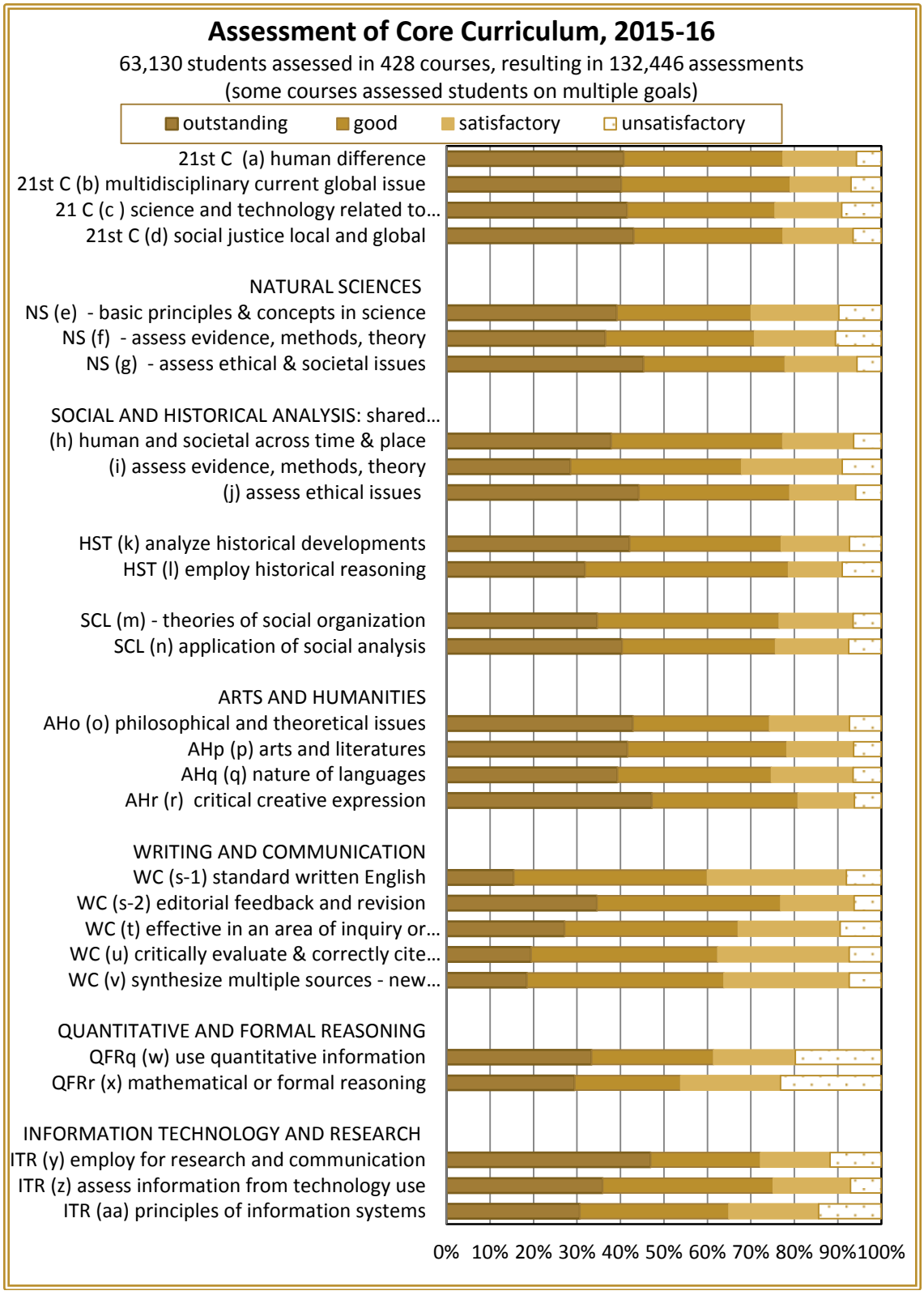
Yes	Assessment Implementation and Results o Conducted and reports on at least one direct assessment measure of at least one of the primary student learning goals; results included in report
Yes	Response to Assessment Results: "Closing the Loop" activities o Describes the process used to review assessment information and use for improvement o Modification/refinement of pedagogy, curriculum, assessment tool, or learning goal based on assessment results. Provides evidence and/or examples of improvements made based on the results of learning outcomes assessment.

Academic year 2015-16 was the fifth year of the Core Curriculum, and saw the graduation of the second class governed by the Core requirements. It was also the second year of the second 3-year cycle of learning goals assessment results, in which the reporting departments have been asked to include a substantive analysis of the cumulative assessment results; information about modifications that may have been made to any course based on prior assessments; and observations on changes in student learning outcomes over the reporting cycle. These results add to the already impressive tally for the first full Core assessment cycle, covering academic years 2011-12 through 2013-14.

The Core Requirements Committee requested reports from 210 of the 365 Core courses offered in Fall 2015 and 217 of the 390 Core courses offered in Spring 2016. For AY 2015-16, we received results from these departments for 375 courses (88% response rate) with combined enrollments of approximately 59,820. Reflecting the CRC's encouragement of best practices in implementing Core goal assessments, results were voluntarily filed for another 53 courses (14 in Fall, 41 in Spring). The combined enrollments of all courses reporting Core goals assessments was 63,130. Table 1 lists the departments from which assessment reports were received this year. Many courses are certified for more than one Core goal, giving us a database of 132,446 individual student assessment scores ranging across the 28 Core goals in AY 2015-16. Since the launch of the Core Curriculum, over 497,000 assessments have been reported for the Core learning goals.

Table 1: Departments and Programs Submitting Core Assessment Reports AY 2015-16	
School	**Departments and Programs**
SAS	AMESALL, Art History, Asian Languages & Cultures, Biological Sciences, Classics*, Cognitive Science, Comparative Literature, Computer Science, Criminal Justice*, Earth & Planetary Sciences*, Economics*, Exercise Science & Sport Studies*, Italian, Psychology*, English (Literature), English Writing Program, French, Genetics, Geography, Linguistics, Mathematics, Middle Eastern Studies, Molecular Biology & Biochemistry, Philosophy, Physics & Astronomy, Political Science, Russian & East European Languages & Literatures, Spanish & Portuguese; SAS *Signature* Courses; SAS Honors Program
SC&I	Communication & Information, Information Technology & Informatics
GSE	Education (undergraduate)*
MGSA	Dance, Music, Theater
EJBSPPP	Planning & Public Policy, Public Health
SEBS	Animal Science, Ecology, Evolution & Natural Resources, Environmental & Business Economics, Environmental Policy, Institutions, and Behavior, Environmental Sciences, Food Science, Landscape Architecture, Marine & Coastal Sciences, Meteorology, Microbiology, Nutritional Science, Plant Biology & Pathology
SMLR	Labor Studies & Employment Relations*
** Department reporting assessment results for online courses only, as required for online Core courses/sections.*	

Figure 1: 2015-16, detail



The results for AY 2015-16 are presented in Figure One. This year, satisfactory level (or better) achievement ranged from the mid-90% range to the high 70% range on one of the quantitative reasoning goals.

Caution should be used in interpreting the aggregate results from any annual cycle because only a third of the departments participating in the Core are required to report assessment results in a given year. We have now completed our fifth year of the Core assessment reporting cycle. All departments offering Core-certified courses now have implemented at least one round of learning goals assessments, and those asked to report in AY 2015-16 now have substantial information on changes in performance over time on which to base decisions about "close the loop" actions to further improve student learning outcomes. As Figure Two shows, there has been enough variation to indicate that rigorous standards are being imposed, and enough across the board success to suggest that in terms of both instruction and student learning outcomes the Core is quite effective. In many categories over 90% scored satisfactory or better. In only one category did the satisfactory results dip below 80%: 77% of results for the formal and quantitative reasoning goal x (QR) were satisfactory or better this year. This, however, is still well above the 65% benchmark for satisfactory outcomes, and takes place against a background of a very large increase in the number of assessment results for this goal (12,387), derived from large-enrollment foundational courses in three STEM departments reporting this year: Mathematics, Physics & Astronomy, and Computer Science.

The CRC does, however, have concerns that some courses are reported as having over 75% of students achieving goals at the "outstanding" level. The CRC plans to continue its work with departments and instructors to refine assessment instruments and procedures to better distinguish between levels of student outcomes.

Yes	Response to Assessment Results: "Closing the Loop" activities o Describes the process used to review assessment information and use for improvement o Modification/refinement of pedagogy, curriculum, assessment tool, or learning goal based on assessment results. Provides evidence and/or examples of improvements made based on the results of learning outcomes assessment.

As noted earlier, the CRC is impressed with faculty efforts to "close the loop" even when the assessment results in their courses are above the benchmarks the CRC has set. An extensive range of examples is kept on file with the CRC**.** Clearly, faculty members are engaged in modifications and refinements of pedagogy, course design, and assessment prompts based on Core assessment results.

Figure 2: Cumulative 2011-2016, detail

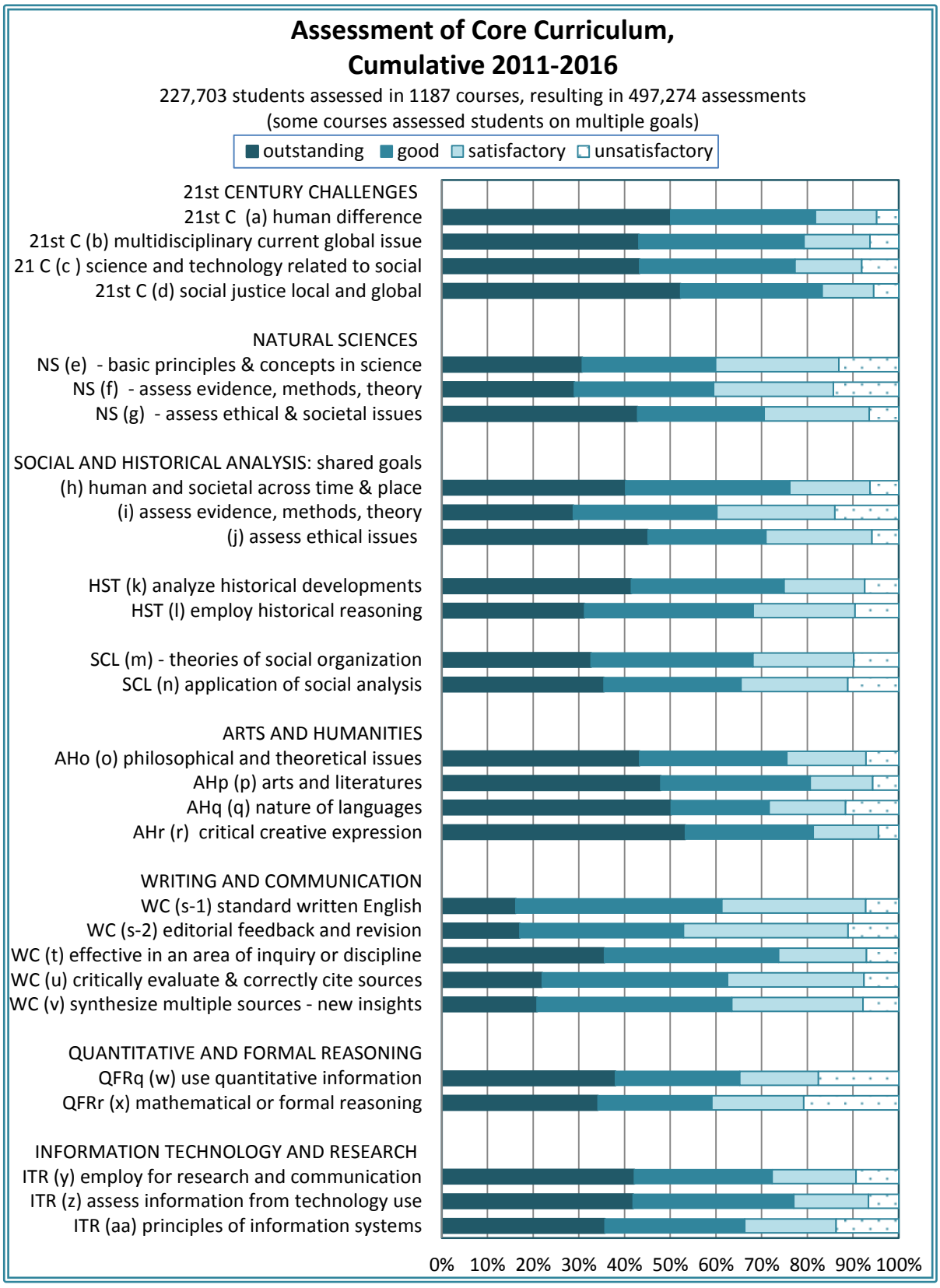


Table 2 presents data on the number of reports submitted from 2011 to 2016 indicating plans to modify courses in response to the Core goals assessment results. The CRC was concerned by the drop in the percent of courses reporting planned modifications in AY 2014-15, and to emphasize and support "closing the loop" activities, called attention to this in its outreach to reporting departments in AY 2015-16. In addition, the reporting form was revised to give this greater prominence (see "CRC Internal Reviews and Revisions of Practices and Procedures," below). The response was a notable increase in AY 2015-16 in the number of faculty reporting plans to revise some aspect of course design, delivery, and/or assessment in their Core-certified courses, as noted in Table 2. Over the entire period, approximately 45% of the reports included such plans. In AY 2015-16, almost two-thirds of reports included such plans.

Table 2: Progress in Creating a Culture of Evidence, Experimentation, and Continuous Improvement

Cycle Year	Assessment Results Received *(no. courses)*	Plans to Improve Student Learning Reported		
		Fall	Spring	Year total
2011-12	115	13	13	26 (23%)
2012-13	206	32	36	68 (33%)
2013-14	200	40	49	89 (45%)
2014-15	215	23	36	59 (27%)
2015-16	428	134	144	278 (65%)
Five-Year Totals	1164	242	278	520 (45%)

Table 3 provides a summary of the types of modifications proposed. The process of assessment has encouraged our faculty to think about ways to improve student learning in their courses, and encouraged an increased degree of faculty engagement with the student learning outcomes of our general education requirements as manifested in their individual courses.

Table 3: Summary of Types of Revisions Made in Core Curriculum Courses in Response to Assessment Results, 2011-2016

Revise / add homework	· Add assignments, often requiring more frequent and regular interaction with the course material · Add more online homework practice with automated responses.
Revise instructors' in-class presentations or topics or readings	· Add more in-class instruction targeted on problematic topic or skill; provide more explicit guidance about what students need to do · Add more multi-media sources to assist with conceptualization of abstract concepts · Introduce more authentic or primary sources · Add video instruction to free up more in-class time · Assign fewer texts and probe them in more depth
Revise in-class activities	· Add or re-structure peer review · Add or re-structure in-class group work · Provide more in-class examples, modeling, and group practice · Introduce i>clickers for real time assessment of student comprehension · Add more of an approach or activity the instructor had previous success with
Revise content	· Rebalance topics, rethink how topics are covered, and introduce more repetition and practice exercises

	· Add more instruction on critical assessment of sources and synthesis of information · Depart from current disciplinary orthodoxy in pedagogy or texts
Add scaffolding	· Add a re-write requirement or option · Scaffold assignments to guide students through a skill or process step-by-step and build ability along the way · Revise curricular sequencing or add prerequisites
Add metacognition activities	· Add reflective and meta-cognition activities · Provide more in-class opportunities to practice and reflect on the desired skill · Further emphasize Core goal throughout the course
Revise prompts or assessment method	· Reframe exam questions, assignments, and/or assessment prompts to bring them into better alignment with the Core goal · Align prompts, assignments, and expectations across instructors and TAs · Develop department consensus on substantive expectations at different points in the student's progress · Add a portfolio requirement · Use data analytics to identify and reach out to at-risk students.

Yes	Successful Improvement: Provides evidence that "closing the loop" actions result in improved student achievement of goals
n/a	Maintenance/Updating Process o Describe the process used to review and update learning goals o Learning goals are updated, as needed, in light of changes in University, unit, or program mission and strategic plans, advances in disciplinary knowledge, evolution of stakeholder needs, and changes in student preparation and capacity

Notable instances of improvement based on changes adopted in response to previous assessment results were included in the AY 2015-16 reports submitted by Asian Languages and Literatures, Mathematics, and Spanish and Portuguese.

The Asian Languages and Literatures department reported successful innovations in two very different courses, one on Japanese literature and film and the other on Chinese language instruction. In the course, "A-Bomb Literature and Film in Japan," the innovation was adding on-line forums for students to discuss the films shown in class. These discussion forums allowed the students to engage more deeply with the content and context of the films. The instructor noted marked improvement in the students' response papers both in terms of details provided and the development of arguments. In "Intermediate Chinese Reading and Writing for Mandarin Speakers," the instructor incorporated the social media platform WeChat in the classroom. Students were asked to enter their answers in sentence form to the group chat during class. Student got immediate feedback on their work in that they could compare their answers to those of their peers. This also allowed the instructor to better gage student understanding of the material and to adjust the pace of instruction accordingly. The instructor also noted that WeChat improved student engagement in the course.

The Mathematics Department had success improving student learning of a key concept (expected value) in its Introduction to Probability course by restructuring the way the concept was presented and deviating from the standard textbook approach. The improvement has, in fact, been so great that the course instructors are considering introducing students to more advanced topics in this area of study in future semesters.

In Introduction to Hispanic Literature, offered by the Department of Spanish and Portuguese, positive results came from very minor changes in the course structure. The instructor increased the weight on the oral presentation from 5 to 10 percent of the course grade and scheduled these presentations over two class meetings rather than one to allow for question-and-answer periods. The instructor reports that the students were energized by this exercise and "proud of and motivated by their ability to work through a text in a more formal setting."

CRC Internal Reviews and Revisions of Practices and Procedures

The CRC has also been proactive in assessing its own practices. Based on what we learned in 2011-12, and the first round of Core assessment reports, the CRC refined the Core rubrics before AY 2012-13. Almost all were streamlined to improve the faculty's experience with them and increase their comfort in using them for assessment of their students' achievement of the Core goals. Assessment reports received for AY 2012-13, 2013-14, 2014-15 and in the current year show a pattern of more clearly delineated results for different Core goals, across a broad range of assessment prompts. This suggests that the revised rubrics are more effective tools for measuring student performance on the desired learning goal outcomes. In addition, the Dean for Educational Initiatives and Curriculum worked with the University's Office of Instructional Technology to add a rubric option to the grading tools in our online course management system, Sakai. Since AY 2013-14 the Core Curriculum rubrics have been included in this tool. The tool is designed to be flexible enough to allow instructors and departments to use it for any rubric they may adopt for assessment of course or departmental/program learning goals. This both encourages the broad use of assessment rubrics throughout the University curriculum and facilitates the collection of course-level and program-level assessment data.

To reduce the burden of reporting and tracking Core assessment results, the SAS Office of Undergraduate Education worked with OIRT to develop an on-line assessment reporting system. This system was launched Fall 2015. The response from faculty and administrators has overall been very positive. Previously, undergraduate program directors were asked to collect assessment data from instructors and enter these data in a Microsoft Word document form. Many directors complained about the challenges tracking down reports from instructors and the time costs of transferring the data from the instructors' reports to the formatted Word document. The on-line system allows instructors to enter the data themselves and gives the undergraduate director the ability to review all reports from her department prior to submission. The undergraduate director must still chase down instructors to be sure they have filed reports, but the system simplifies the task of tracking those reports that are still outstanding.

Besides reducing the administrative burden of reporting Core assessment results, the on-line reporting system has several features that will improve the quality of the reporting going forward. The on-line form contains the same reporting fields as the old form but is prepopulated with the goals for which a course is certified. The system allows for the generation of reports by Core goal or academic department, facilitating the analysis of Core assessment data by the CRC and other stakeholders. This feature will also allow the CRC to track courses for which assessment reports have not been filed and therefore to follow up with the instructors and undergraduate program directors to improve the response rate. The on-line system will also serve as an archive of assessment reports going forward. The CRC, as well as undergraduate directors and instructors, will be able to refer to past reports to evaluate how assessment results have changed in response to modifications of instruction or assessment methods. It is notable that the online reporting system, along with the CRC's heightened emphasis on close-the-loop actions, appears to have contributed to a significant increase in the number

of Core assessment reports including plans for such modifications in the future. Two-thirds of reports in AY 2015-16 featured observations about the student learning outcomes, and plans to implement changes in the future, the highest percentage since Core assessment reporting began. This is an encouraging outcome of the improvements made to the Core assessment reporting process, and may suggest that faculty engagement with the Core goals and the pace of close-the-loop activity across the Core Curriculum have been underestimated until now.

In Fall 2015, the CRC implemented a new policy to perform maintenance reviews of courses previously certified for the Core. The formal statement of this policy is presented in Appendix D. The CRC developed this policy during Spring 2015 to address concerns from various stakeholders that some certified courses no longer met the requirements of the Core Curriculum.

The first set of reviews targeted certified courses that had not been offered in the past three academic years. Courses certified for the Core are expected to be offered regularly, preferably once each academic year. Many students use the list of Core courses to plan their courses of study over several semesters. Retaining courses on this list that are never, or rarely, offered creates unnecessary confusion and frustration for student planning. Based on enrollment data, the CRC identified 43 Core courses that had not been offered since prior to Fall 2013. Departments with courses on this list were contacted and asked whether they intended to offer these courses in the next academic year or whether they wanted these courses retired. Many of the contacted departments responded with specific plans to offer the targeted courses in AY 2016-17 and even Spring 2016. Some departments expressed their desire to offer the targeted courses in AY 2016-17 but noted that doing so was contingent on coordinating faculty teaching schedules, hiring qualified instructors, and the like. In the end, seven courses were proposed for retirement by their offering departments. The most common reason given for proposing retirement was that the faculty member who had developed and taught the course was no longer at Rutgers. The CRC decided to retain in the Core all courses for which departments had specific or tentative plans to offer in the next academic year. Next fall, the CRC will follow up with these departments to see if they were able to carry out their plans.

The second set of reviews was aimed at addressing concerns that some Core certified courses have evolved over time in ways that no longer allowed students to achieve the Core learning goals. The CRC was guided by a two-fold conviction. First, courses in the Core Curriculum should be sufficiently challenging so that our students can develop their abilities. Second, these courses must also be accessible to a broad range of students. To begin the review process, the CRC examined grade distributions in Core courses. The members of the CRC recognize that grade distributions are very noisy measures of course standards and used them only to identify courses to subject to further review. The CRC decided to review courses falling at the two extremes of the grade distribution data. The first set of courses identified was large enrollment courses (100+ total enrollment per semester) with 70 percent or more grades of A for three or more semesters, including one semester during AY 2014-15. The second set was courses with multiple semesters with 50 percent or more grades of D, F, or W.

Subcommittees of the CRC membership met with the departments offering these courses. The goal of these meetings was to gather information on the structure and administration of the course, the expectations set for student performance, and the relationship between the course objectives and the Core goals for which it was certified. The offering department was then asked to prepare a short document (one to two pages) describing the course and how the standards for student performance are appropriate for a Core Curriculum course. Departments were also asked to describe any plans to revise the course going forward. At the final CRC meeting of the semester, committee members reviewed the

submitted documents and heard reports from the subcommittees. Committee discussion focused on the issues that are always front and center in the certification process: did these courses allow students to achieve the Core learning goals and did the assessment plans allow for measurement of that achievement?

Based on these reviews, the CRC voted to recommend the retirement of two courses. After reviewing past assessment reports and the materials submitted by the offering department, members of the CRC felt that these courses no longer met the Core goals for which they were certified.

External Review by the Core Evaluation Committee

At the Spring 2015 SAS Faculty and Affiliates Meeting, a resolution was passed to establish a committee to evaluate the Core Curriculum. The resolution stated that the committee should consist of eight elected members, two from each of the disciplinary areas of SAS. The election was held in Fall 2015 by electronic ballot of the SAS faculty. After the committee had been elected, SAS Executive Dean Peter March issued a charge to the committee to conduct "a thorough review of the strengths and weaknesses of the Core Curriculum in achieving its stated purposes as a goals-based set of general education requirements." The full text of the charge can be found in Appendix E. The Committee for the Evaluation of the Core (CEC) was asked to address questions related to three broad areas of inquiry: the student experience, structure and design, and governance and management.

The CEC began its work in earnest in Spring 2016. The CEC met with a variety of stakeholders in the Core, including students, CRC leadership, deans of the schools participating in the Core, and personnel from the SAS Office of Academic Services. The CEC also held a town hall meeting for the SAS faculty.

The work of the CEC is still on-going. The CEC plans to conduct surveys of students and faculty in Fall 2016 and to present its final report to Executive Dean Peter March at the December 2016 SAS Faculty and Affiliates meeting.

Future Directions in Assessment of the Core Curriculum

While we remain committed to the advantages in effectiveness that we believe derive from our authentic, embedded, direct assessment tools and process, as discussed above in the section on Assessment Plan, Structure and Process, now that we have graduated our first two cohorts of Core students (in Spring 2015 and Spring 2016), the CRC will be exploring additional assessment tools that might be used near graduation to get a cumulative picture of student learning as the Core Curriculum further matures. One thought is to explore how the CRC might build on assessments being done in major program capstone courses, recognizing that different majors emphasize the further development of different subsets of Core Curriculum goals, along with their discipline or program specific learning goals. Another option might build on the natural overlap between our liberal arts and sciences Core Curriculum goals and the so-called 'soft skills' almost universally sought by employers to develop a direct, authentic, assessment tool that students would also be motivated to use for their own purposes.

Perhaps most important, it is already clear that this ongoing assessment process will insure continued faculty attention to the Core Curriculum and its effectiveness, preventing the ossification of general education that removed general education from the daily concern of faculty in earlier decades. In fact, the Core continues to provoke lively discussions among faculty.

We are grateful for the role assessment plays in keeping the faculty actively engaged with undergraduate education and we look forward to presenting further progress to the ECA each year. The Core Requirements Committee, in alignment with the University, is committed to promoting and maintaining a genuine culture of improvement through direct faculty involvement in and ownership of assessment of student learning.

Submitted on behalf of the Core Requirements Committee by:

Carolyn Moehling
Associate Dean of Undergraduate Education and Professor of Economics
School of Arts and Sciences

Core Requirements Committee, 2015-16

Chair, Larry Scanlon, English, SAS

Raphael Caprio, Director, Undergraduate Program, EJBSPPP
Diane DeLauro, Office of Academic Services, SAS
Frances Egan, Philosophy, SAS
Martin Gliserman, English, SAS
Martha Haviland, Division of Life Sciences, Genetics, SAS
Susan Lawrence, Dean for Educational Initiatives and Curriculum [*ex officio*]
Robin Leichenko, Geography, SAS
Thomas Leustek, Associate Dean of Academic Administration, SEBS
Richard Ludescher, Dean of Academic Programs, SEBS
Carolyn Moehling, Associate Dean of Undergraduate Education, SAS
Gregory Mountain, Earth and Planetary Sciences, SAS
Andrew Murphy, Political Science, SAS
Lenore Neigeborn, Office of Academic Services, SAS
Michelle Neumyer, Assistant Dean, Academic Programs, SEBS *(alternate)*
Michael Pennella, Business Communication Program, RBS
Timothy Power, Classics , SAS
Michael Saks, Mathematics, SAS
Kurt Spellmeyer, English and Director of the Writing Program, SAS
Sharon Stoerger, Information, Technology, and Informatics, SC&I
Andrew Vershon, Molecular Biology & Biochemistry, SAS
David Wilder, Psychology, SAS

Committee Staff:
Karen Dennis, Assistant Dean for Assessment, Office of Undergraduate Education, SAS

Appendix A:
http://sasoue.rutgers.edu/core/core-learning-goals

RUTGERS
School of Arts and Sciences

SAS CORE CURRICULUM

Effective for first year students entering in fall 2011 and beyond and for transfer students entering fall 2012 and beyond.

The innovative SAS Core Curriculum establishes common goals that, along with a major and minor specialization, prepare SAS graduates for successful lives and careers built on a critical understanding of the natural environment, human behavior, and the individual's role in diverse societies. Conversant with multiple intellectual traditions, modes of analysis, and schools of thought and armed with well-developed communication and reasoning skills, SAS graduates are prepared to meet any challenge!

The distinctive SAS Core Curriculum cultivates and nurtures curiosity by emphasizing the process of inquiry and the creation of knowledge through debate, research, and scholarship. The SAS Core Curriculum incorporates SAS students into the research mission of our great university and arms them with the intellectual resources required for excellence in meeting the rapidly transforming challenges of the 21st century.

The SAS Core Curriculum is based on the **learning goals** that form the core of a modern liberal arts education at a leading 21st century public research university *and* that are sought after by graduate programs and employers *across* occupations and professions. The learning goals clearly articulate *what students will be able to do* upon completion of the Core, incorporating the reasons for these requirements right into the requirements themselves. Achievement of these learning outcome goals equips our students not just to get a first job, but to excel in that job, advance in that career, and change careers as the demands of the 21st century continue to evolve. At the same time, these goals push students to examine not just *"what"* they want to be, but more importantly, *"who"* they want to be, by discovering their values, talents, and passions.

The SAS Core Curriculum goals complement and reinforce each other and permeate all of our courses and fields of study. The Core Curriculum provides a solid catalyst for excellence in completing major, minor, and elective credits where the student will develop advanced skill in many of these Core goals. Defined in terms of learning goals, the innovative SAS Core Curriculum is different from the traditional model of general education distribution requirements that students at other schools fulfill by taking introductory courses in a range of majors. Each goal represents a particular type of critical thinking and problem-solving employed across the arts and sciences. Progress in completing the Core is measured not by the number of courses taken, but by the number of goals achieved in courses specially designed to put these goals front and center.

The SAS Core Curriculum begins with four learning goals that bring the diverse and rich intellectual heritage of the liberal arts and sciences to bear on the **21st Century Challenges** SAS graduates will face as global citizens and leaders. Students meet these goals in courses that join multidisciplinary scholarship with the most pressing issues of the day. Many of the new SAS *Signature* Courses – specially designed courses of grand intellectual sweep focused on questions of lasting importance taught by leading SAS scholar-teachers -- meet these goals and bring students and faculty together in communities of common interest and experience.

By emphasizing the ability to critically examine the natural environment, human behavior, and the individual's role in society, the Core learning goals prepare SAS students to be creative problem solvers, strong leaders, and reflective individuals in whatever life path they choose. The Core Curriculum's **Areas of Inquiry** learning goals equip SAS graduates with an understanding of knowledge, research, and the liberal arts and sciences throughout our history right up to tomorrow's cutting edge where our faculty work today. These goals stretch the boundaries of traditional academic disciplines by leading students back to those predisciplinary questions that transcend the artificial division of knowledge into distinct majors and minors.

The SAS Core Curriculum equips SAS students with the **Cognitive Skills and Processes** that are central to life-long learning and participation in the world of ideas and the corridors of power. Through the Core, SAS students hone their writing and communication skills and develop their quantitative and formal reasoning skills. And SAS students delve behind facile assumptions to examine the wide array of modern conduits of information (and misinformation) and their relationship to knowledge in the 21st century information age.

The SAS's exciting new Core Curriculum embodies our belief in and aspirations for our diverse and growing student body and reflects the mission of Rutgers University as a comprehensive public research university for the 21st Century.

RUTGERS
School of Arts and Sciences

The SAS Core Curriculum (ratified 5/08) Summary of Learning Outcomes

The SAS Core Curriculum focuses on the learning goals that form the core of a modern liberal arts education at a leading comprehensive 21st century public research university. Student progress in the Core is measured by the breadth of goals achieved, and a single course can fulfill multiple goals. Students exercise meaningful choice among courses from across disciplines specifically certified as meeting these goals.

Upon completion of the SAS Core Curriculum ***STUDENTS WILL BE ABLE TO:***

21ST CENTURY CHALLENGES (6 credits) *Students must meet 2 goals.* [**21C**]

- a. **Analyze the degree to which forms of human difference shape a person's experiences of and perspectives on the world.**
- b. **Analyze a contemporary global issue from a multidisciplinary perspective.**
- c. **Analyze the relationship that science and technology have to a contemporary social issue.**
- d. **Analyze issues of social justice across local and global contexts.**

AREAS OF INQUIRY

Natural Sciences (6 credits) – each course meets e and (f or g or both). *Students must meet 2 goals.* [**NS**]

- e. **Understand and apply basic principles and concepts in the physical or biological sciences.**
- f. **Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.**
- g. **Identify and critically assess ethical and societal issues in science.**

Social and Historical Analysis (see HST and SCL below – all courses meet at least one of h, i, & j)

- h. **Understand the bases and development of human and societal endeavors across time and place.**
- i. **Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in social and historical analysis.**
- j. **Identify and critically assess ethical issues in social science and history.**

Historical Analysis (3 credits) - all courses meet one (h, i, j) *Students must meet one (k or l).* [**HST**]

- k. **Explain the development of some aspect of a society or culture over time, including the history of ideas or history of science.**
- l. **Employ historical reasoning to study human endeavors.**

Social Analysis (3 credits) - all courses meet one (h, i, j) *Students must meet one (m or n).* [**SCL**]

- m. **Understand different theories about human culture, social identity, economic entities, political systems, and other forms of social organization.**
- n. **Apply concepts about human and social behavior to particular questions or situations.**

Arts and Humanities (6 credits) *Students must meet two goals.* [**AH**]

- o. **Examine critically philosophical and other theoretical issues concerning the nature of reality, human experience, knowledge, value, and/or cultural production.**
- p. **Analyze arts and/or literatures in themselves and in relation to specific histories, values, languages, cultures, and technologies.**
- q. **Understand the nature of human languages and their speakers.**
- r. **Engage critically in the process of creative expression**

COGNITIVE SKILLS AND PROCESSES]

Writing and Communication - (9 credits: 355:101; one WCr (s2); and one WCd (t) *Students must meet 4 goals.* [**WC** - WC101; WCr; WCd]

- s. **(s1) Communicate complex ideas effectively, in standard written English, to a general audience.**
  (s2) Respond effectively to editorial feedback from peers, instructors, &/or supervisors through successive drafts & revision. [WCr]
- t. **Communicate effectively in modes appropriate to a discipline or area of inquiry.** [WCd]
- u. **Evaluate and critically assess sources and use the conventions of attribution and citation correctly.**
- v. **Analyze and synthesize information and ideas from multiple sources to generate new insights.**

Quantitative and Formal Reasoning (6 credits or 3 plus placement out of 3) *Students must meet 2 goals.* [**QFR** - QFRq; QFRr or placement out of]

- w. **Formulate, evaluate, and communicate conclusions and inferences from quantitative information.** (includes various quantitative methods courses as well as 640 courses) [QQ}
- x. **Apply effective and efficient mathematical or other formal processes to reason and to solve problems.** (includes 640 courses and formal reasoning courses – or placement out of) [QR]

Information Technology and Research (3 credits or equivalent) *Students must meet one goal.* [**ITR**]

- y. **Employ current technologies to access information, to conduct research, and to communicate findings.**
- z. **Analyze and critically assess information from traditional and emergent technologies.**
- aa. **Understand the principles that underlie information systems.**

A SINGLE COURSE MAY BE USED TO MEET MULTIPLE GOALS. ALL COURSES MUST BE CREDIT-BEARING, GRADED COURSES CERTIFIED BY THE SAS FACULTY AS MEETING CORE GOALS. (e.g. E credit courses cannot be used to meet goals, nor can pass/no credit courses.) Generally, students will need to take 10 – 14 courses to complete the Core, some of which may also fulfill major or minor requirements.

Appendix B
Alignment of Core Curriculum Learning Goals with Rutgers University Learning Goals

CORE CURRICULUM	RUTGERS UNIVERSITY LEARNING GOALS											
	Intellectual and Communication Skills					Understanding Human Behavior, Society, and the Natural Environment					Responsiblities of the Individual in Society	
	Critical Thinking	Commun-ications	Mathematical Reasoning and Analysis	Scientific Inquiry	Informa-tion and Computer Literacy	Historical Understanding	Multi-cultural and International Understanding	Understanding Literary and Artistic Expression	Under-standing the Bases of Individual and Social Behavior	Understanding the Physical and Biological World	Citizenship Education	Social and Ethical Awareness
21st CENTURY CHALLENGES												
a. human differences												
b. multidisciplinary current global issue												
c. science and technology related to social issues												
d. social justice local and global												
NATURAL SCIENCES												
e. basic principles & concepts												
f. assess evidence, methopds, theory												
g. assess ethical & societal issues												
SOCIAL AND HISTORICAL ANALYSIS: shared goals												
h. human and societal across time & place												
i. assess evidence, methods, theory												
j. assess ethical issues												
HISTORICAL ANALYSIS												
k. analyze historical developments												
i. employ historical reasoning												
SOCIAL ANALYSIS												
m. theories of social organization												
n. application of social analysis												
ARTS AND HUMANITIES												
o. philosophical and theoretical issues												
p. arts and literatures												
q. nature of languages												
r. critical creative expression												
WRITING AND COMMUNICATION												
s-1. standard written English												
s-2. editorial feedback and revision												
t. effective in an aread of inquiry or discipline												
u. critically evaluate & correctly cite sources												
v. synthesize multiple sources - new insights												
QUANTITATIVE AND FORMAL REASONING												
w. use quantitative information												
x. mathematical or formal reasoning												
INFORMATION TECHNOLOGY AND RESEARCH												
y. employ for research and communication												
z. assess information from technology use												
aa. principles of information systems												

For legibility, see http://sas.rutgers.edu/component/docman/doc_download/549-core-sas-a-university-learning-goals-aligned

Appendix C
21st Century Challenge Core Curriculum Student Learning Goal Rubrics [REVISED, 2012]
For all Core rubrics, see: http://sasoue.rutgers.edu/core/rubrics-for-core-goals

21st Century Challenges [21C] - Goal a

GOAL a - *Student is able to…* **Analyze the degree to which forms of human difference shape a person's experiences of and perspectives on the world.**			
OUTSTANDING	GOOD	**SATISFACTORY**	UNSATISFACTORY (D/F)
Specifically explicates links between multiple types of human difference and individuals' or groups' experiences of and perspectives on the world. **Evidences a sophisticated understanding** of those differences and their effects on an a 21st century challenge.	**Examines** links between some types of human difference relevant to the course and individuals' or groups' experiences and perspectives on the world. **Demonstrates an understanding** of some effect(s) of those differences on a 21st century challenge.	**Identifies** links between human differences relevant to the course and individuals' or groups' experiences and perspectives on the world, largely through **satisfactory presentation of course materials**. **Demonstrates some understanding** of how some differences affect a 21st century challenge.	**Fails to** link significant forms of human difference relevant to the course to individuals' or groups' experiences of the world and perspectives on the world as relevant to focus of the particular course. **Fails to** delineate the impact of differences on the issues that are central to the course.

21st Century Challenges [21C] - Goal a

GOAL b – *Student is able to…* **Analyze a contemporary global issue from a multidisciplinary perspective.**			
OUTSTANDING	GOOD	**SATISFACTORY**	UNSATISFACTORY (D/F)
Demonstrates a sophisticated understanding in identifying, comparing, and contrasting at least two different disciplinary perspectives as applied to a pressing contemporary global issue. **Critically analyzes and assesses** the advantages/ scope and disadvantages/ limits of each perspective. **Draws original and thoughtful conclusions.**	**Identifies, compares, and contrasts** at least two different disciplinary perspectives as applied to a pressing contemporary global issue. **Notes some** advantages/ scope and disadvantages/ limits of each perspective. **Touches on broader connections and implications.**	**Satisfactorily summarizes** different disciplinary perspectives on a contemporary global issue. **Acknowledges that** each perspective has advantages and disadvantages. **Satisfactorily presents course materials.**	**Fails to** clearly identify disciplinary perspectives any relevant global issues. **Fails to** accurately distinguish between at least two different disciplinary perspectives on the issue. **Fails to** identify and explicate the advantages and disadvantages of each perspective. **Lacks any** critical analysis of any disciplinary approach to the issue.

Appendix C
21st Century Challenge Core Curriculum Student Learning Goal Rubrics [REVISED, 2012]
For all Core rubrics, see: http://sasoue.rutgers.edu/core/rubrics-for-core-goals

21st Century Challenges [21C] - Goal c

GOAL c - *Student is able to…* **Analyze the relationship that science and technology have to a contemporary social issue.**			
OUTSTANDING	GOOD	**SATISFACTORY**	UNSATISFACTORY (D/F)
Critically analyzes the extent to which science and technology can address a 21st C social issue AND/OR **critically explicates** how the issue is itself is the result of advances in scientific understanding or new technologies. **Thoroughly explores** the challenges and opportunities associated with various ways address the issue. **Demonstrates a high level of scientific literacy beyond that necessary for responsible citizenship and informed life choices.** **Distinguishes between** questions that are fundamentally moral or political and those that are scientific or technological.	**Explains** the extent to which a 21st C social issue can be addressed by science and technology AND/OR **explains** how the issue itself is the result of advances in scientific understanding or new technologies. **Assesses** possible ways to address the issue, with some attention to the complexities or challenges associated with each. **Demonstrates a level of scientific literacy necessary for responsible citizenship and informed life choices.** **Makes some distinctions between** questions that are basically moral or political and those that are scientific or technological.	**Satisfactorily presents** course material on the extent to which a 21st C social issue can be addressed by science and technology AND/OR how the issue itself is the result of advances in scientific understanding or new technologies. **Identifies** possible ways to address the issue, with some appreciation for the complexities or challenges associated with each. **Demonstrates an acceptable level of scientific literacy.**	**Fails to** articulate a link between a 21st C social issue and advances in scientific understanding or the development of new technologies. **Fails to** identify possible solutions or the need for possible solutions. **Major gaps** in scientific literacy. **Fails to distinguish** between scientific, moral, and political judgments. Relies on opinion or assertion instead of analysis.

21st Century Challenges [21C] - Goal d

GOAL d - *Student is able to…* **Analyze issues of social justice across local and global contexts.**			
OUTSTANDING	GOOD	**SATISFACTORY**	UNSATISFACTORY (D/F)
Provides **detailed critical analysis** of what "social justice" means in local and global contexts and offers a critical assessment of existing approaches. Provides a **sophisticated exploration** of the causes of a particular social justice(s) or injustice(s) and the connections to other local and global issues. **Critically and thoughtfully evaluates** ways to advance social justice in the 21st c and identifies who/what would need to change to achieve social justice in a particular context. **Demonstrates original thinking** in assessing the complexities of the effort and potential solutions.	Provides a **robust explanation** of what "social justice" means in local and global contexts. **Explains** the causes of a particular social justice(s) or injustice(s), placing it in local and global contexts. **Demonstrates an understanding** of the goal of advancing social justice in the 21st C and who/what would need to change to achieve social justice in a particular context. **Identifies** resources for and obstacles to change, and alternative solutions.	**Satisfactorily presents** course material on what social justice means in local and global contexts. **Describes** causes of social (in)justice with some attention to local and global contexts. **Touches on** obstacles to and resources for change, and alternative solutions.	**Shows little understanding** of what is meant by social justice and **little or no reflection** on the meaning of social justice or the role context might play. **Minimal and/or unexamined claims** about causation. **Fails to** provide any context for the existing state of affairs, or any coherent discussion of paths to change. **Relies on opinion and polemic.**

Appendix D:

CRC Policy on Core Curriculum Maintenance

Jurisdiction:

> The Core Requirements Committee shall review the effectiveness of the core requirements, monitor assessments of these requirements and recommend appropriate actions to the Executive Dean for consideration by the faculty of SAS. **The committee shall recommend revisions to the approved list of courses satisfying core requirements.** …Decisions about which courses meet or do not meet the goals of a particular requirement will not be made by individual faculty members teaching the courses, nor will they be made by departments. Instead, a large committee with elected and appointed representatives from all academic areas and several departments and Schools will develop criteria for reviewing courses in each area, review courses, and make recommendations to be approved by the faculty on the whole. Following the model of the Curriculum Committee, **this will be a deliberative and consultative process, with the Core Requirements Committee charged to discuss the Core and the parameters of courses with interested parties before bringing recommendations to faculty meetings.**
>
> A Report from the Ad Hoc Core Curriculum Committee, May 6, 2008 Final Draft 5 incorporating all changes made at the May 6 & May 7, 2008 meeting of the SAS and Affiliate Faculty. (2008, May). Retrieved from http://sasoue.rutgers.edu/component/docman/?task=doc_download&gid=44&Itemid=.\

Rationale:

The Core Requirements Committee took as its first charge timely certification of courses as meeting Core Curriculum learning goals so that students would have ample opportunities to complete the Core. The content of courses naturally evolve over time and the array of courses actively offered change as faculty and student interest change. Hence, it is necessary to periodically revisit the past certification of courses to keep the Core Curriculum current.

Having now graduated the first class of students entered under the Core Curriculum, it is an appropriate time to adopt procedures for ensuring that certified courses continue to meet Core goals and that they do so at levels appropriate for students' development of those skills, knowledge, and abilities identified in the Core learning goals. This includes ensuring that only courses currently available to students are included on lists of Core courses.

Criteria:

During the spring 2015 semester, the Core Requirements Committee (CRC), developed criteria for identifying Core courses for a process of review and consultation with departments regarding retirement from or recertification in the Core.

Retirement Review

1. Department request

   A department may request at any time that one of its courses be removed from the Core, or that certification for particular goals be removed.

2. Infrequency of offering

   Departments and programs are expected to offer Core courses on a regular basis. Courses never offered, or offered infrequently, are strong candidates for retirement from the Core. Retaining such courses on Core lists adds an unnecessary level of difficulty and frustration to student planning, at times ultimately slowing time to graduation. A course will be considered a candidate for retirement if:

   - It is not offered within 3 semesters from the semester of its certification.
   - It is not offered for 4 consecutive semesters.

Substantive Recertification Review

Ideally, recertification would be required for all courses on a set schedule. And, of course, normally most courses would be recertified. However, since full review of all Core courses is not feasible for the CRC, at least initially, the CRC will annually create a short list of courses for recertification review based on criteria listed below. Recertification reviews will be similar to those done for courses newly proposed for the Core and will be conducted in consultation between the CRC and the offering department.

3. Course no longer addresses, or assesses, Core learning goals.

Core courses are required to have Core goals front and center in their design and implementation. Regular substantive assessments of student achievement of certified learning goals and reporting of results to the CRC is required for certification, and recertification.

- Assessment reports are not submitted as required.
- Certified Core goals are not listed on the syllabus.
- Certified Core goals are no longer front and center in the course design and among the course learning goals.

4. Course expectations are not set at a level appropriate to development of Core learning goals.

As a goal based curriculum, the emphasis is on achievement of learning goals rather than completion of courses per se. In such a large, diverse university, it is important that all Core courses provide students with a common "satisfactory" level of achievement of Core goals. This is, of course, exceedingly difficult to compare across courses and disciplines, but as a faculty we have a duty to ensure that Core Curriculum courses that are generally open are sufficiently challenging to allow our students to *develop* (not just demonstrate) their abilities, yet not so challenging that a substantial proportion of registered students cannot meet the goals at a "satisfactory" level. In short, Core courses are expected to be academically rigorous but accessible to a broad range of students.

Generally, a department's standards for learning outcomes in the major provides assurance that the department's courses are pitched at the appropriate level of challenge. With general education, two problems potentially arise. On the one hand, a department may be too demanding of those not intending to pursue study in the discipline; on the other hand, a department may fail to demand enough of students enrolled in its general education courses that cannot be counted toward the major.

None of the following criteria are definitive. Rather, each suggests that further examination is warranted, either with an eye towards recalibrating the demands made on students or learning from teaching techniques that appear to be exceptionally successful. Particular care will be exercised in applying these criteria to small courses where the success or failure of a just a few students can disproportionately affect percentages, and to courses directed at specific populations such as honors sections or disciplinary majors meeting the "Writing and Communication in the discipline" goal, for example.

- Assessment results consistently indicate that more than a third (33 %) of students' achievement of the Core learning goal is "unsatisfactory."
- Assessment results consistently indicate that more than half (50 %) of students' achievement of the learning goal is reported as "outstanding."
- Grade distributions are consistently out of line with expectations given the level, subject matter, and target audience of the course.

It is important to bear in mind the difference between grading and assessment. The primary function of assessment is diagnostic and the use of 33% and 50% should be understood as a reference points rather than standards to be met. These may indicate that either the expectations of the course, the pedagogy, the assignments assessed, or the understanding of each level in the assessment rubric needs recalibration.

In all cases, the purpose of re-certification review will be to engage with departments to bring courses back in line with the expectations of the Core and the criteria for certification.

Implementation:

1. After Spring semester assessment reports are submitted in early June, the deans in the SAS Office of Undergraduate Education will review these reports, course syllabi, and grade distributions and identify courses that meet the criteria for further examination. They will also identify courses that have not been offered within 3 semesters of their certification or for 4 consecutive semesters. In late summer or early fall, departments will also be asked if they would like to submit any modifications to their list of currently certified courses.

2. A list of these courses, together with supporting evidence, will be presented to the CRC at its first meeting in the Fall. The CRC will vote on which courses warrant further examination and consultation with the offering departments. Subcommittees of the CRC will be assigned to work with particular departments and courses.

3. By **October 15**, the CRC will notify the offering departments of courses under review. Meetings will be scheduled for department representatives to meet with the assigned CRC subcommittee. At these meetings, the discussion will focus on bringing courses back in line with expectations of the Core and the criteria for certification. Departments will be asked to provide, in writing, their plans for changing the courses under review. These documents will be due by **November 15.**

4. The CRC as a whole will review the documents submitted by the offering departments and receive reports from the subcommittees. The CRC will then vote whether to (1) re-certify the course in the Core; (2) put the course on notice and review it again after the Spring semester; or (3) retire the course from the Core.

5. The CRC will submit in its December report to the faculty, its recommendations for courses to be retired from the Core. The faculty will vote on these recommendations.

6. Course retirements will go into effect for the subsequent academic year. For example, a course approved by the faculty for retirement in December 2015, will be removed from the Core effective Fall 2016. Students taking the course before Fall 2016 will get Core credit. The CRC, as well as the offering department, must be sure to communicate the change in a course's status to the student body.

This process will repeat annually.

MEMORANDUM

TO: Faculty of the School of Arts and Sciences

FROM: Peter March

RE: Evaluation of the Core Curriculum

DATE: November 10, 2015

Charge to the ad hoc SAS Committee Constituted to Evaluate the Core Curriculum

Preamble. In May, 2008, the Arts and Sciences faculty approved the creation of a new Core Curriculum to replace the interim *Liberal Arts and Distribution Requirements* that were put in place when Rutgers, Douglass, Livingston, and University Colleges amalgamated to form the School of Arts and Sciences. The new Core was designed by a faculty committee with broad representation from the various Rutgers New Brunswick Schools, departments, and programs and was ratified by the SAS and Affiliates faculty. It marked a significant departure from the traditional model of distribution requirements that made up the general education distribution requirements of the four colleges, substituting a model predicated on a defined set of learning goals that could be met in multiple ways.

In addition to approving the structure of the new Core Curriculum, the faculty also approved the creation of a new Core Requirements Committee (CRC) charged with implementing the curriculum. The founding document *A Report from the Ad Hoc Core Curriculum Committee of May 6, 2008* notes that implementation would take several years. It also emphasizes the ongoing need to monitor the effectiveness of the Core in providing a high-quality education that prepares students for success in fulfilling other degree requirements and leads to positive outcomes after graduation. The Core was launched with the incoming class in 2011.

The Core holds a unique place in the architecture of New Brunswick undergraduate education as the only curricular element that spans nearly all the New Brunswick Schools. Only students in the School of Engineering and the School of Pharmacy, which is now part of RBHS, do not complete the Core. The Edward J. Bloustein School of Planning and Public Policy (EJBSPP), the School of Communication and Information (SC&I), the School of Management and Labor Relations (SMLR), the School of Social Work (SSW), the Mason Gross School of the Arts (MGSA) BA programs, and the five-year Graduate School of Education (GSE) do not directly admit students. In order to complete a major in one of these Schools, students must matriculate in the School of Arts and Sciences (SAS).

Additionally, undergraduate students matriculating in the Rutgers Business School (RBS) and those SAS students planning to complete majors offered by other Schools must complete the Core Curriculum. These Schools are represented as Affiliates on the Core Requirements Committee under provisions in the *School of Arts and Sciences Bylaws*. As of fall 2015, the School of Environmental and Biological Sciences (SEBS) also requires its students to complete the Core (plus an experiential learning requirement). As provided for in the founding documents, all of these Schools may offer courses that satisfy various Core goals. This practice was a continuation of previous college practices, not an innovation of the Core Curriculum.

We have graduated a cohort of students who entered the university after the introduction of the Core Curriculum - and who spent their entire undergraduate career at Rutgers with the Core in effect. So, the time

seems right to evaluate the degree to which the Core has fulfilled the expectations of a goals-based general education as articulated in the founding document. The importance of such a re-evaluation was underlined by the passage of a resolution at the May, 2015 School of Arts and Sciences faculty meeting calling for the election of a committee for this purpose (cf. Appendix 1).

Charge. Accordingly, I am charging the newly-elected Core Evaluation Committee (CEC) (cf. Appendix 2) with the task of conducting a thorough review of the strengths and weaknesses of the Core Curriculum in achieving its stated purposes as a goals-based set of general education requirements. The CEC may make recommendations to the Executive Dean of Arts and Sciences regarding possible modifications and changes to our current requirements so as to provide an excellent general education curriculum to Rutgers undergraduate students.

The CEC may recommend substantial revision of the Core, including replacement with another means of providing a broadly-based general education, such as a distribution model; or it can recommend any number of revisions that retain the basic goal-based approach and practical design of the Core while modifying and improving specific elements. In any event, CEC recommendations for change should be consistent with best practices among our Committee on Institutional Cooperation (CIC) and AAU peers. Mechanisms to implement CEC recommendations accepted by the Executive Dean are not within the specific charge to the committee but rather will be determined, as needed, by the Executive Dean in consultation with the faculty.

In fulfilling its charge, the CEC will consult widely and systematically with the Core's stakeholders. These include: members of the SAS faculty; a broad range of students; current and previous members of the Core Requirements Committee; the leadership, involved faculty, and staff from the other Schools in New Brunswick with majors who take the Core; and administrators and staff in SAS who work regularly with undergraduates, such as advisors in the Office of Academic Services.

As part of its review process, the CEC, and all Arts and Sciences faculty, should familiarize themselves with key documents associated with the creation and implementation of the Core, including

- *A Report from the Ad Hoc Core Curriculum Committee of May 6, 2008*
- *Transforming Undergraduate Education, Report of the Task Force on Undergraduate Education, July 18, 2005;*
- *The Office of Undergraduate Education web-page information and resources on the Core for faculty*
- *CRC Report to the Executive Dean, October 2014*

Finally, I ask that the CEC be prepared to give a short oral report on its organization and plans at the upcoming December 14th meeting of the Arts and Sciences faculty and that the Committee's final written report be available by the May meeting of the Arts and Sciences faculty.

Guidance. Rutgers has changed significantly since the Core Curriculum was adopted in 2008, notably with the integration of Rutgers Biomedical and Health Sciences (RBHS), the adoption of Responsibility Center Management (RCM), the launch of an Honors College, and the growth in intended STEM majors. During the same period, there have been substantial changes in the patterns of students' disciplinary choices at universities nationwide. In addition, our Middle States Commission on Higher Education accreditor continues to emphasize assessment of student achievement of learning goals and its use to improve academic outcomes (see, e.g., *Standards for Accreditation and Requirements of Affiliation (2014) and Middle States Commission on Higher Education).* Accordingly, this evaluation of the Core Curriculum should take into account the current context, which in some respects is quite different from the context within which the Core was adopted seven years ago.

The issue before us is to evaluate the extent to which the goal-based approach to general education embodied in the Core is serving the purposes for which it was adopted and to recommend any changes that may improve general education at Rutgers New Brunswick. While the new contextual factors have to be taken into

account when recommending change, to the greatest extent possible the committee's recommendations should be based strictly on academic judgments about what will prepare students for success in fulfilling other degree requirements and lead to positive outcomes after graduation.

The following questions illustrate the range of issues that the CEC may wish to investigate as part of its mandate. The committee should not feel obliged to address every question in its final report and it may choose to consider additional questions.

Student Experience. Does the Core Curriculum serve Rutgers undergraduate students well? In particular,

- To what extent do students who complete the Core have the right mix of skills and knowledge to pursue upper-level course work? Or, in other words, to what extent does the Core successfully prepared students for success in fulfilling other degree requirements and led to positive outcomes after graduation?
- To what extent are the Core requirements appropriately communicated to students? How might communication be improved?
- To what extent do students understand the Core to provide a coherent and meaningful approach to liberal arts and sciences education?
- Are there any Core requirements that students have difficulty meeting?
- To what extent is the Core appropriately aligned with undergraduate majors and minors? How might better alignment be brought about?

Structure and Design. Has the structuring of the Core Curriculum around 21st Century Challenges, Areas of Inquiry, Cognitive Skills and Practices, with their associated Learning Goals, and Signature Courses been an effective design? In particular,

- To what extent are the 21st Century Challenges, Areas of Inquiry and Cognitive Skills and Processes still relevant and should they continue to play a central role in the Core?
- To what extent is the current set of Learning Goals appropriate? Are there ways they should be modified, expanded, condensed, or simplified?
- To what extent are the Signature Courses a successful part of the Core? What should their role be?
- Can we determine any effect the structure and design of the Core has on patterns of student preferences?
- Has the policy of allowing single courses to fulfill multiple Core goals been successful? How might it be changed or modified to produce better student learning?
- To what extent are the Core Curriculum's purposes and requirements appropriately communicated to faculty?
- To what extent have faculty incorporated Core advising into their major advising?
- To what extent does the faculty view the Core as providing a more coherent and meaningful approach to general education than other available models?
- To what extent are Affiliate Schools and academic units outside Arts and Sciences well served by the Core? Have they identified strengths and weaknesses of the Core that differ from those voiced by Arts and Sciences faculty?

Governance and Management. Are the governance structure and management practices of the Core Curriculum effective? In particular,

- To what extent does the membership structure of the Core Requirements Committee appropriately reflect the Core's stakeholders?

- To what extent are the criteria used by the Core Requirements Committee to evaluate courses available to faculty before submitting courses, and to what extent are they perceived to be appropriate applied?
- To what extent is the process for modifying the Core or adding and removing courses appropriate and effective?
- To what extent is student achievement of Core learning goals in Core courses being appropriately assessed? Are instructors using assessment results effectively to improve course quality? How might the assessment of learning goals be improved?

Appendix 1 – Resolutions of the Arts and Sciences Faculty, May 7, 2015

"Be it resolved that an elected ad hoc SAS faculty committee shall be established to evaluate the Core. This evaluation shall be based on quantitative data as well as on faculty and student experience. The committee shall be established using the procedure currently used to elect SAS faculty committees. The committee shall have eight elected members, two from each of the four subareas of the SAS. The SAS Nominating and Elections Committee shall seek volunteers who wish to serve on this ad hoc committee and shall prepare a slate of sixteen (16) candidates, four (4) from each sub-area. Eight (8) of them shall be chosen by election. The ballot shall include three lines for write-in candidates. The ad hoc committee shall distribute its report prior to the December 2015 meeting of the SAS. It shall consider such recommendations as: 1) Abolishing the CORE and moving to a straightforward distribution requirement; 2) Modifying the CORE, to enhance the educational experience of SAS students; to reexamine the learning goals and assessment, as well as the vision and mission of the CORE; 3) Allowing only SAS courses to fulfill the CORE; 4) Establishing a language requirement."

Appendix 2 – Membership of the Core Evaluation Committee

Elected Members
Eric Carlen, Mathematics
Lori Covey, Cell Biology and Neuroscience
Torgny Gustafson, Physics and Astronomy
Paul McLean, Sociology
Kathleen Scott, Cell Biology and Neuroscience
Barry Sopher, Economics
Mark Wasserman, History
Carla Yanni, Art History

Administrative Support
Shari Reiner, Executive Dean's Office