

Stony Brook Curriculum Mission:

The mission of General Education at Stony Brook University, aka The Stony Brook Curriculum, is [...] to provide our students with a diverse educational foundation that will facilitate lifelong active and adaptive learning and inspire engaged global citizenship.

[From: http://www.stonybrook.edu/commcms/senatecas/_pdf/Gen-Ed-Final-Report-Aug-20-2012.pdf]

Background: The Gen Ed program at Stony Brook was first conceived by a “policy committee” (the Stony Brook Committee on General Education, 2009-11) and later revised by an “implementation committee” in 2011-12. “The first act of Stony Brook University’s Committee on General Education in 2009 was to adopt a mission statement. It reads:

Our purpose is to assess and reconsider the Stony Brook General Education curriculum to provide our students with a diverse educational foundation that will facilitate lifelong active and adaptive learning and inspire engaged global citizenship.” [...]

In reviewing and designing a new General Education curriculum, the committee chose four **Guiding Principles** to direct their thinking:

- [Clarity of Purpose](#)
- [Experience beyond the Classroom](#)
- [Unifying Themes](#)
- [Simplicity, Flexibility, and Accessibility](#)

Stony Brook Curriculum Values:

Based on our four Guiding Principles, the General Education Committee concluded that the essence of a college general education should be organized into four **structural components**, which encapsulate the General Education Philosophy.

- [Acquire and Practice Foundational Skills](#)
- [Synthesize Knowledge into Understanding](#)
- [Develop and Exercise Civic Responsibility](#)
- [Apply Knowledge and Skills beyond the Classroom](#)

Also based on the four Guiding Principles and the General Education Philosophy as defined in Chapter 1 of [this report](#), the Implementation Committee (convened 2011-12) developed a commensurate set of requirements, as follows:

Through the general education curriculum, [students will:](#)

DEMONSTRATE VERSATILITY by showing proficiency in each of ten fundamental learning objectives:

- [Explore and Understand the Fine and Performing Arts \(ARTS\)](#)
- [Engage Global Issues \(GLO\)](#)
- [Address Problems using Critical Analysis and the Methods of the Humanities \(HUM\)](#)
- [Communicate in a Human Language Other than English \(LANG\)](#) (see note)
- [Master Quantitative Problem Solving \(QPS\)](#)
- [Understand, Observe, and Analyze Human Behavior and the Structure and Functioning of Society \(SBS\)](#)
- [Study the Natural World \(SNW\)](#)
- [Understand Technology \(TECH\)](#)
- [Understand the Political, Economic, Social, and Cultural History of the United States \(USA\)](#)
- [Write Effectively in English \(WRT\)](#)

Note: CEAS majors, the Athletic Training major, the Respiratory Care major, and the Clinical Laboratory Sciences major are exempt from the LANG learning objective. Students enrolled in the major in Social Work are exempt from the LANG learning objective, but are required to enroll in and pass with a letter grade of C or higher the first semester of an elementary foreign language course numbered 111, or satisfy through alternate methods (see [Communicate in a Human Language Other than English--LANG](#)).

EXPLORE INTERCONNECTEDNESS by completing a course that [examines significant relationships between Science or Technology and the Arts, Humanities, or Social Sciences \(STAS\)](#).

PURSUE DEEPER UNDERSTANDING by completing advanced studies in *three of four* distinct areas of knowledge. A "+" sign in the abbreviations for these learning objectives signifies that most courses in this category will be advanced courses at the 200- to 400-level. These learning objectives are:

- [Experiential Learning \(EXP+\)](#)
- [Humanities and Fine Arts \(HFA+\)](#)
- [Social and Behavioral Sciences \(SBS+\)](#)
- [Science, Technology, Engineering, and Mathematics \(STEM+\)](#)

PREPARE FOR LIFE-LONG LEARNING by taking (in most cases) courses which may also satisfy other SBC major or other degree requirements.

- [Practice and Respect Critical and Ethical Reasoning \(CER\)](#)
- [Evaluate and Synthesize Researched Information \(ESI\)](#)

- [Speak Effectively before an Audience \(SPK\)](#)
- [Write Effectively within One's Discipline \(WRTD\)](#)

Stony Brook Curriculum Assessment Philosophy:

The Assessment Philosophy is a component of one of the Guiding Principles as defined by the General Education Policy Development Committee between 2009 and 2011. The committee chose four Guiding Principles to direct their thinking. They described their philosophy on assessment within the "[Clarity of Purpose](#)" Guiding Principle.

"Clarity Concerning Assessment"

A learning-outcome-driven General Education fits extremely well into emerging models of assessment. The principal goal of assessment is to measure the effectiveness of any given course in meeting its educational goals. Courses in the new General Education system, by virtue of the learning-outcome-defined categories, will have clear and expected measures.

We believe that each course that applies for certification in the General Education system not only must specify how it meets the learning outcomes of a category, but also how its effectiveness will be assessed.

We also believe that faculty involvement in the development and use of the assessment process will lead to continuing course improvement. Logically, we rely upon the expertise of our faculty in their own fields. No one can judge the quality of a history paper as well as a history professor, and no one can judge the quality of student performance on a physics exam as well as a physics professor. Therefore, we envision a simple mechanism by which faculty expertise can be brought into the assessment cycle through the Undergraduate Program Directors.

We believe that General Education courses must apply for recertification every four years and that the collected assessment material will be included as part of the recertification process."

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Curriculum Map

The Stony Brook Curriculum corresponds to the State University of New York General Education Requirements (SUNY GER) as well as the Middle States Commission on Higher Education Standards for Accreditation (Standard III, 5. a. and b.), as follows.

SBC Philosophy (as conceived)	SBC requirements (as implemented)	abbr	SBC Objective	SUNY GER equivalent (12, some duplicated)	MSCHE (8, unduplicated)
Synthesize Knowledge into Understanding	DEMONSTRATE VERSATILITY	ARTS	Explore and Understand the Fine and Performing Arts (ARTS)	The Arts	
Develop and Exercise Civic Responsibility	DEMONSTRATE VERSATILITY	GLO	Engage Global Issues (GLO)	Western Civilizations; AND Other World Civilizations	cultural and global awareness and cultural sensitivity
Synthesize Knowledge into Understanding	DEMONSTRATE VERSATILITY	HUM	Address Problems using Critical Analysis and the Methods of the Humanities (HUM)	Humanities	values, ethics and diverse perspectives
Acquire and Practice Foundational Skills	DEMONSTRATE VERSATILITY	LANG	Communicate in a Human Language Other than English (LANG) (see Note)	Foreign Language	
Acquire and Practice Foundational Skills	DEMONSTRATE VERSATILITY	QPS	Master Quantitative Problem Solving (QPS)	Mathematics	quantitative reasoning
Synthesize Knowledge into Understanding	DEMONSTRATE VERSATILITY	SBS	Understand, Observe, and Analyze Human Behavior and the Structure and Functioning of Society (SBS)	Social Science	
Synthesize Knowledge into Understanding	DEMONSTRATE VERSATILITY	SNW	Study the Natural World (SNW)	Natural Science	scientific reasoning
	DEMONSTRATE VERSATILITY	TECH	Understand Technology (TECH)		technological competency
Develop and Exercise Civic Responsibility	DEMONSTRATE VERSATILITY	USA	Understand the Political, Economic, Social, and Cultural History of the United States (USA)	American History	values, ethics and diverse perspectives
Acquire and Practice Foundational Skills	DEMONSTRATE VERSATILITY	WRT	Write Effectively in English (WRT)	Basic written & oral communication	written communication
Synthesize Knowledge into Understanding	EXPLORE INTERCONNECTEDNESS	STAS	Examine significant relationships between Science or Technology and the Arts, Humanities, or Social Sciences (STAS)		
Apply Knowledge and Skills beyond the Classroom	PURSUE DEEPER UNDERSTANDING	EXP+	Experiential Learning (EXP+)		
	PURSUE DEEPER UNDERSTANDING	HFA+	Humanities and Fine Arts (HFA+)		
	PURSUE DEEPER UNDERSTANDING	SBS+	Social and Behavioral Sciences (SBS+)		
	PURSUE DEEPER UNDERSTANDING	STEM+	Science, Technology, Engineering, and Mathematics (STEM+)		
Develop and Exercise Civic Responsibility	PREPARE FOR LIFE-LONG LEARNING	CER	Practice and Respect Critical and Ethical Reasoning (CER)	Critical Thinking	critical analysis and reasoning
Acquire and Practice Foundational Skills	PREPARE FOR LIFE-LONG LEARNING	ESI	Evaluate and Synthesize Researched Information (ESI)	Information Management	information literacy
Acquire and Practice Foundational Skills	PREPARE FOR LIFE-LONG LEARNING	SPK	Speak Effectively before an Audience (SPK)	Basic written & oral communication	oral communication
Acquire and Practice Foundational Skills	PREPARE FOR LIFE-LONG LEARNING	WRTD	Write Effectively within One's Discipline (WRTD)		written communication

[from Curriculum Map and learning outcomes - Gillespie.xlsx]

2017-18 Assessment Project - Workload Structure and Responsible Parties

The Stony Brook Curriculum Implementation Group (SBCIG) has developed a procedure for assessing the Stony Brook Curriculum (SBC) for the purposes of programmatic assessment. The following stakeholders will oversee and actively participate in processes.

Faculty/Staff/Administrators

The SBCIG, which meets regularly throughout the year, leads and manages the administrative oversight of the SBC. This group has responsibility for reviewing, evaluating, certifying, assessing, and monitoring the university's program of general education.

The SBCIG consists of five faculty and one administrator. Among the faculty members is the Vice Provost for Undergraduate Education (VPUE), who is the cognate administrator for the Stony Brook Curriculum. The VPUE chairs the SBCIG, and the Director of Academic Assessment assists the VPUE in administering the SBCIG. The Provost and the University Senate Executive Committee partnered in 2012 to select and approve the membership of the SBCIG.

A widely accepted practice, codified in NY State law, is that the faculty "shall be responsible for setting curricular objectives, for determining the means by which achievement of [learning] objectives is measured, for evaluating the achievement of curricular objectives and for providing academic advice to students."¹

To ensure that Stony Brook Curriculum remains in the hands of the faculty, the VPUE will work with shared governance to invite faculty representatives from academic departments to serve on SBC Faculty Working Groups. Each of these faculty committees, with the support of the SBCIG and the Office of Academic Assessment, will work to establish maintain consistency in the assessment process, interact with instructors in departments, and recommend actions to the VPUE and the SBCIG. For more information on the SBC Working Groups, see the "Assessment Process" section of this document.

The University will use evidence about student achievement of the SBC learning objectives for further improvement and alignment of the curriculum. Published data will be aggregated at the department level or higher.

Participation among faculty, staff and administrators is essential for the success of the project. If requested, all departments and faculty shall participate as part of their instructional responsibility "for evaluating the achievement of curricular objectives."²

¹ 8 NYCRR § 52.2 (b) (3) <http://www.highered.nysed.gov/ocue/aipr/guidance/gpr6.html>

² 8 NYCRR § 52.2 (b) (3) <http://www.highered.nysed.gov/ocue/aipr/guidance/gpr6.html>

Students

The assessment and recertification process depends on both active and passive student participation. As their active role, students should comply with the [University policy for minimal instructional and student responsibilities](#), including the expectation for students to complete course evaluations fairly and thoughtfully. As a passive role for students, the assessment process utilizes student work as evidence of learning.

While students have significant rights under FERPA, they do not have to consent to use of their work for assessment. School officials who have "legitimate educational interests," such as the evaluation and improvement of programs, may access educational records without student consent.

[§99.31 Under what conditions is prior consent not required to disclose information?](#)

(a) An educational agency or institution may disclose personally identifiable information from an education record of a student without the consent required by §99.30 if the disclosure meets one or more of the following conditions:

(1)(i)(A) The disclosure is to other school officials, including teachers, within the agency or institution whom the agency or institution has determined to have legitimate educational interests.

Committee structure:

1. SBC Implementation Group (SBCIG). For practical purposes, the SBCIG will serve as the steering committee for assessment, in consultation with the other groups below.

SBCIG
Charles Robbins, VPUE
Scott Sutherland, Math
Brenda Anderson, Psych
Susan Scheckel, English
David Ferguson, Tech and Soc
Kane Gillespie, OAA

2. [Undergraduate Council](#): This group has purview over curricular matters not limited to single governance units, and will be consulted and included in the process. For example, we ask the UC to nominate members for the working groups. Details below.

3. College Curriculum Committees: Consultative and nominate members of the Faculty Working Groups

4. SBC Faculty Working Groups

To distribute the workload and to expedite the process, we will coordinate the discussion among four working groups, organized loosely by the traditional academic disciplines (Humanities and Fine Arts (HFA, in yellow on the following chart), Social and Behavioral Sciences (SBS, green), Science Technology Engineering and Math (STEM, blue), and Life Long Learning (LLL, orange). Each group will focus on four or five similar SBC categories, as indicated in the following chart.

Objective	abbr	Committee
Explore and Understand the Fine and Performing Arts (ARTS)	ARTS	HFA
Humanities and Fine Arts (HFA+)	HFA+	HFA
Address Problems using Critical Analysis and the Methods of the Humanities (HUM)	HUM	HFA
Communicate in a Human Language Other than English (LANG) (see Note)	LANG	HFA
Write Effectively in English (WRT)	WRT	HFA
Practice and Respect Critical and Ethical Reasoning (CER)	CER	LLL
Evaluate and Synthesize Researched Information (ESI)	ESI	LLL
Experiential Learning (EXP+)	EXP+	LLL
Speak Effectively before an Audience (SPK)	SPK	LLL
Write Effectively within One’s Discipline (WRTD)	WRTD	LLL
Engage Global Issues (GLO)	GLO	SBS
Understand, Observe, and Analyze Human Behavior and the Structure and Functioning of Society (SBS)	SBS	SBS
Social and Behavioral Sciences (SBS+)	SBS+	SBS
Understand the Political, Economic, Social, and Cultural History of the United States (USA)	USA	SBS
Master Quantitative Problem Solving (QPS)	QPS	STEM
Study the Natural World (SNW)	SNW	STEM
Examine significant relationships between Science or Technology and the Arts, Humanities, or Social Sciences (STAS)	STAS	STEM
Science, Technology, Engineering, and Mathematics (STEM+)	STEM+	STEM
Understand Technology (TECH)	TECH	STEM

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To populate the four SBC Faculty Working Groups, we will draw faculty appropriately from existing committees (such as the college undergraduate curriculum committees and the Undergraduate Council), directly from departments, from among directors of undergraduate studies, from the pool of Academic Assessment Coordinators as well as from former members of [the 2013 Academic Assessment Task Force](#). Each working group will include approximately 3-5 faculty (plus the Director of Academic Assessment) and will meet reasonably frequently, starting soon and lasting through the end of the Spring 2018 semester.

The process to populate the working groups led to the following membership.

HFA	SBS	STEM	LLL	EXP+ (subcommittee of LLL)
Brooke Belisle, Art	Mark Aronoff, Linguistics	Alan Tucker, AMS	Leo Bachmaier, CS	Susan Scheckel, English
Peter Khost, Writing	Michael Barnhart, History	Dale Drueckhammer, Chemistry	Marvin O'Neal, UG BIO	Robert Kaplan, Writing
Sarah Jourdain, French and SPD	Suzanne Valazquez, SSW	Ross Nehm, E/E and iSTEM	Robert Kaplan, Writing	Marianna Savoca, Career Center
Giuseppe Gazzola, Italian (F17 only)	Eva Carceles-Poveda, Economics	Robert McCarthy, Physics	Debbie Zelizer, SHTM	Kane Gillespie, OAA
Ritch Calvin, WGSS	Peggy Christoff, Asian/Asian-Am (F17 only)	Thomas Graf, Linguistics	Renee Fabus, SHTM	
Catherine Scott, Faculty Center	Ahmed Belazi, VPSA	Davinder Kaur, SPD	Amy Milligan, COB	
			Kristin Hall, Univ. Library	
Kane Gillespie, OAA	Kane Gillespie, OAA	Kane Gillespie, OAA	Kane Gillespie, OAA	
Glenn Hackett, OAA	Glenn Hackett, OAA	Glenn Hackett, OAA	Glenn Hackett, OAA	

Assessment Process:

The goals of each SBC Faculty Working Group will be to:

- Develop by December evaluation rubrics for each of the learning outcomes among the SBC objectives;
- Select by December which Spring 2018 courses to assess; and
- Determine:
 - The type(s) of evidence to use
 - The sampling methodology in collecting evidence
 - How to evaluate and interpret the evidence
 - The benchmarks for satisfactory student performance in each category
 - The use of the results
- Communicate when appropriate with individual instructors during the evaluation period to help conduct the evaluation, data collection and analysis on classes offered in Spring 2018.

Although there are about 1600 certified courses in the SBC curriculum, we offer only a portion of the 1600 courses each semester, spanning the full curriculum and providing appropriate selection of courses for students to maintain progress toward their degree. We will work to assess an appropriate sample of about 60-90 courses (3-4 per category), chosen from the Spring 2018 offerings. We will strive to evaluate achievement of about 10% of students per each of the SBC objectives. We will aggregate data from these evaluations to produce a one-page assessment report for each of the SBC objectives, which will include a data summary and recommended actions for each SBC area. For more information, see Methodology below.

Learning outcomes:

The Stony Brook Curriculum has a total of 19 Objectives and almost 70 learning outcomes and sub-outcomes which the faculty define in the Undergraduate Bulletin (course catalog) or in the individual links above.

http://sb.cc.stonybrook.edu/bulletin/current/policiesandregulations/degree_requirements/categoriesandlearningoutcomes.php

For this assessment cycle, we will evaluate 15 SBC objectives, which encompass 62 learning outcomes and sub-outcomes, as follows.

Abbr	LO#	learning outcomes (as published in the Undergraduate Bulletin; some outcomes have been subdivided)
ARTS	ARTS 1	1. Develop an understanding of works of art and their practitioners through an examination of the works in the historical and cultural context in which the art was or is created.
ARTS	ARTS 2	2. Understand the materials, forms, and/or styles of art through study of arts theories and the works themselves.
ARTS	ARTS 3	3. Understand ideas, materials, technical skills, and forms of art in order to express oneself creatively through an artistic medium.
ARTS	ARTS 4	4. Develop tools of aesthetic discourse through contact with works of art – as well as through writings on art – related to its critical understanding, cultural placement, and appreciation.
HUM	HUM 1	1. Understand the major principles and concepts that form the basis of knowledge in the humanities.
HUM	HUM 2	2. Understand the theoretical concepts that undergird one or more of the humanities.
HUM	HUM 3	3. Develop an awareness of some of the key historical themes of one or more of the humanities.
HUM	HUM 4	4. Develop an awareness of the multi- or interdisciplinary nature of issues within the humanities.
HUM	HUM 5	5. Develop an awareness of the contexts (historical, social, geographical, moral) in which these issues emerged.
HUM	HUM 6	6. Develop the verbal and written skills to articulate valid arguments on these issues.
LANG	LANG 1a	1a. Write with basic proficiency in at least one non-English language.
LANG	LANG 1b	1b. Read with basic proficiency in at least one non-English language.
LANG	LANG 1c	1c. Listen with basic proficiency in at least one non-English language.
LANG	LANG 1d	1d. Speak with basic proficiency in at least one non-English language.

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Abbr	LO#	learning outcomes (as published in the Undergraduate Bulletin; some outcomes have been subdivided)
LANG	LANG 2	2. Demonstrate an understanding of the people and culture associated with that language.
LANG	LANG 3	3. Present coherent information and ideas in that language to listeners or readers about the people and culture of that language.
WRT	WRT 1a	1a. Research a topic,
WRT	WRT 1b	1b. develop an argument
WRT	WRT 1c	1c. organize supporting details.
WRT	WRT 2	2. Produce coherent texts within common college-level written forms.
WRT	WRT 3	3. Demonstrate the ability to revise and improve such texts.
CER	CER 1	1. Demonstrate an ability to distinguish among the ethical principles guiding human behavior.
CER	CER 2	2. Apply ethical reasoning to a variety of situations and human experience.
CER	CER 3	3. Understand and differentiate ethical, legal, social justice, and political issues.
ESI	ESI 1	1. Locate and organize information from a variety of appropriate sources.
ESI	ESI 2	2. Analyze the accuracy of information and the credibility of sources.
ESI	ESI 3	3. Determine the relevance of information.
ESI	ESI 4	4. Use information ethically and responsibly.
SPK	SPK 1a	1a. Research a topic,
SPK	SPK 1b	1b. develop an oral argument and
SPK	SPK 1c	1c. organize supporting details.
SPK	SPK 2a	2a. Deliver a proficient and substantial oral presentation.
SPK	SPK 2b	2b. Deliver an oral presentation for the intended audience.
SPK	SPK 2c	2c. Deliver an oral presentation using appropriate media.
SPK	SPK 3	3. Evaluate oral presentations of others according to specific criteria.
WRTD	WRTD 1a	1a. Collect the most pertinent evidence,
WRTD	WRTD 1b	1b. draw appropriate disciplinary inferences,
WRTD	WRTD 1c	1c. organize effectively for one's intended audience, and
WRTD	WRTD 1d	1d. write in a confident voice using correct grammar and punctuation.
GLO	GLO 1	1. Demonstrate knowledge and understanding of the interconnectedness of the world, past and present.
GLO	GLO 2	2. Demonstrate knowledge and understanding of a society or culture outside of the United States.
SBS	SBS 1	1. Understand the major concepts and phenomena that form the basis of knowledge in the social sciences.
SBS	SBS 2	2. Understand methods of inquiry into the social world and the methods social and behavioral scientists use to explore social phenomena including observation, hypothesis development, measurement and data collection, experimentation, and the evaluation and application of evidence.
SBS	SBS 3	3. Understand various types of theory (e.g., behavioral, political, economic, linguistic) that organize predictions and

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Abbr	LO#	learning outcomes (as published in the Undergraduate Bulletin; some outcomes have been subdivided)
		evidence in the social sciences.
SBS	SBS 4	4. Skillfully interpret and form educated opinions on social science issues.
USA	USA 1a	1a. Demonstrate knowledge and understanding of the rights and responsibilities of citizenship,
USA	USA 1b	1b. Demonstrate knowledge and understanding of the workings of federal, state, and municipal governments in the United States.
USA	USA 2	2. Demonstrate knowledge and understanding of U.S. history and society.
USA	USA 3	3. Demonstrate knowledge of a subculture or relationships among subcultures within U.S. society.
QPS	QPS 1	1. Interpret and draw inferences from mathematical models such as formulas, graphs, tables, or schematics.
QPS	QPS 2	2. Represent mathematical information symbolically, visually, numerically, and verbally.
QPS	QPS 3	3. Employ quantitative methods such as algebra, geometry, calculus, or statistics to solve problems.
QPS	QPS 4	4. Estimate and check mathematical results for reasonableness.
QPS	QPS 5	5. Recognize the limits of mathematical and statistical methods.
SNW	SNW 1	1. Understand the methods scientists use to explore natural phenomena including observation, hypothesis development, measurement and data collection, experimentation, and evaluation of evidence.
SNW	SNW 2	2. Understand the natural world and the major principles and concepts that form the basis of knowledge in the natural sciences.
SNW	SNW 3	3. Assess scientific information and understand the application of scientific data, concepts, and models in the natural sciences.
SNW	SNW 4	4. Make informed decisions on contemporary issues involving scientific information.
STAS	STAS 1	1. Apply concepts and tools drawn from any field of study in order to understand the links between science or technology and the arts, humanities or social sciences.
STAS	STAS 2	2. Synthesize quantitative and/or technical information and qualitative information to make informed judgments about the reciprocal relationship between science or technology and the arts, humanities, or social sciences.
TECH	TECH 1	1. Demonstrate an ability to apply technical tools and knowledge to practical systems and problem solving.
TECH	TECH 2	2. Design, understand, build, or analyze selected aspects of the human-made world. The "human-made world" is defined for this purpose as "artifacts of our surroundings that are conceived, designed, and/or constructed using technological tools and methods."

We will postpone the evaluation of SBC learning outcomes in **PURSUE DEEPER UNDERSTANDING** (HFA+, SBS+, STEM+ and EXP+) due to their complexity and the time needed for additional planning.

- [Experiential Learning \(EXP+\)](#)
- [Humanities and Fine Arts \(HFA+\)](#)
- [Social and Behavioral Sciences \(SBS+\)](#)
- [Science, Technology, Engineering, and Mathematics \(STEM+\)](#)

Methodology

Instructional method:

For this assessment project, we will evaluate student learning in about 90 courses. Most of the courses that we will assess will be of the traditional nature and include lecture, seminar, recitation (workshop) or lab instructional types and delivery modes, including online instruction or hybrid models of learning.

Assessment method:

For our project, we will use one *direct* method of assessment and a selection of *indirect* methods. The direct method will utilize a common evaluative rubric for each Gen Ed category that the faculty will develop (see section on Rubrics below). For indirect methods, we will select among the NSSE, SUNY SOS, local course evaluations, and possibly student-focus groups. In the end, we will strive to have at least two indirect assessment methods per SBC objective in addition to the one direct method described here.

Course selection for direct assessment:

The SBC faculty working groups (FWG) and the Office of Academic Assessment (OAA) will integrate multiple strategies in selecting courses to balance faculty recommendations, convenience, and the structure of the curriculum as well as statistical considerations. This initial assessment of the SBC is intended to serve as a pilot with the goal of “checking the pulse” of the SBC while collecting a maximum amount of information with minimum impact on resources and valuable faculty time. This approach will inform future iterations of SBC assessment and will serve to inform faculty in making future decisions about selection criteria, features of representativeness, interpolation within groupings, and most importantly, the ability to extrapolate inferences to broader populations.

The first pass of course selection will leverage the intuition and content knowledge of the members of the FWG's to prioritize large courses taught by tenured faculty. On occasion, the committee could select courses taught by full time lecturers or assistant professors in the event that no other options are available. The FWG's also will consider departmental impact and other course characteristics such as cross-listed courses, and courses with multiple SBC certifications. OAA will conduct a representativeness check to examine the samples within each SBC category and estimate an average 5% margin of error based on 95% confidence level and maximum comparison variance. OAA also will apply a commonly used criterion for general education assessment of 10% of enrollment or greater within each SBC based on Spring 2016 enrollment. Additionally, OAA will balance the selection of courses to minimize overburdening departments and faculty as well as to ensure non-overlapping course selection by SBC.

Notes on course selection:

- We will balance the course selection across all departments and schools, and include representative samples from east, west and Southampton campuses.
- We will target tenured faculty. On a few occasions, to get a statistically sound sample size, we selected courses taught by assistant professors, full-time lecturers, and --in departments where assessment is already expected for local accreditation -- a few adjunct instructors.
- For courses that carry multiple SBC certifications, we expect instructors to only evaluate one *specified* SBC objective. Unfortunately, however, to achieve a statistically sound sample, we cannot allow instructors to choose among the multiple certifications. Instructors can choose to evaluate more than one, but should at least evaluate the specified SBC for multiple-certified courses.
- Course instructors must assess at least as many of the learning outcomes within the prescribed SBC objective as are needed for course certification. For example, SBS has a standard that any "certified social science courses shall fulfill any two of the above outcomes and have a broad content in a specific area of social sciences." Therefore, instructors of SBS courses must assess at least two of the learning outcomes as they are defined in the Bulletin and the evaluative rubrics.

Criterion or Benchmarks: This will be the first time that we will do any assessment on our new General Education curriculum. For a comparison of student proficiencies, we will look at NSSE were relevant to do so. We have NSSE going back several years, so we will be able to see trends in some cases. In addition, we will --wherever possible-- use a common evaluative scale in all 19 of our rubrics (1, 2, 3, 4, 5) corresponding to the traditional grading scale (ABCDF). For the purposes of reporting, we will focus on the portion of students scoring 3 or higher as a criterion, which corresponds to the traditional notion that C is "average." However, for individual outcomes or categories, the faculty might decide that a proficiency of less than 2 is something to look into. Similarly, if a substantial proportion of students are scoring very high, that might also indicate a problem of some sort that we should study further.

Data collection and timeline:

We plan an aggressive production timeline.

1. September 2017: draft the Assessment Plan, with appropriate input from stakeholders.
2. October 11, 2017: Lunch meeting for academic assessment coordinators and other groups to introduce and discuss the process.
3. October/November: Additional meetings with each committee (HFA, STEM, SBS, and LLL) to review/revise outcomes and to develop rubrics and measurement tools for each outcome.
4. October/November: develop rubrics for each SBC category
5. October/November: Meet iteratively with working groups to select courses, design measurement tools and methods to collect data.
6. November/December: select courses to assess from the Spring 2018 offerings and distribute list to departments
7. January: workshops and Q&A sessions. Begin work with individual faculty to design individual course assessment plans or translation rubrics, adapt SBC rubrics and instruments as needed.
8. By the first day of classes Spring 2018 (at the latest): individual course faculty provide a course-specific evaluation rubric for the specified SBC objective (via online form), a syllabus (via Bb), and at least a description (if not an example) of the Spring 2018 class activity that the faculty will use to evaluate student achievement.
9. February-May: continue iterative meetings among OAA, committee members, assessment coordinators, and instructors to discuss active evaluation. Workshops and Q&A sessions as needed.
10. May: collect data, and examples of student performance associated with each course and level of achievement.
11. June compile and analyze data; discuss findings and actions with the working groups
12. July: Final report

Data collection:

For the indirect assessment, we will harvest bits of relevant data from recent NSSE and course/instructor evaluations. We conduct NSSE every 3 years, and we have a set of data going back a few years. We conduct course/instructor evaluations each semester using a third-party software solution, and we will pull in data as needed. We have also discussed conducting a targeted survey of only the students in the selected sample courses, and to do that we would use Qualtrics to do the survey and collect the data.

For the direct assessment, we have developed a set of rubrics to implement across all Gen Ed areas. Each rubric has a 5-level scale, consistent with the ABCDF grading scale. We will ask that instructors either use the Gen Ed rubric directly, or if they are using a rubric already in their class, to either revise their rubric going forward or to create a translation table from their existing rubric to the Gen Ed rubric. Because no two faculty are the same (!), we will build a data collection process to accommodate a few different options for data

collection. We would prefer to receive the data in the form of a spreadsheet [findings (a) below], but we will also (a) develop a web-interface for faculty to enter rubric results manually or we will have graduate students on hand to convert hand-scored rubrics to tabulated data. In the end, the raw data will (ideally) include the following:

Rubrics:

The faculty working groups will develop the evaluative rubrics based on the existing learning outcomes as developed by faculty committees between 2009 and 2014. We will not deviate from the learning outcomes as published in the Undergraduate Bulletin, except to occasionally subdivide outcomes for purposes of measurement. The faculty working groups will develop evaluative criteria on a scale of 1 to 5 for each learning outcome in an effort to refine the definitions of student achievement. Faculty can adapt the rubrics to their individual courses by selecting an "operational verb" from Bloom's taxonomy (as indicated in a list that accompanies each learning outcome on each rubric).

Alongside the scale of student mastery (1 to 5), each rubric also will include a scale of "or earned score" to trigger faculty's intuitive sense of traditional grading. One should think of the evaluation of students based on learning outcomes as "micro grading" based on the evaluative criteria of each learning outcome.

Course instructors must assess at least as many of the learning outcomes within the prescribed SBC objective as are needed for course certification. For example, SBS has a standard that any "certified social science courses shall fulfill any two of the above outcomes and have a broad content in a specific area of social sciences." Therefore, instructors of SBS courses must assess at least two of the learning outcomes as they are defined in the Bulletin and the evaluative rubrics.

The rubrics will be published here, and will be developed using the following evaluative criteria, and will allow instructors to indicate which of the learning outcomes they will use in their class to evaluate students.

Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
ARTS	ARTS 1	1. Develop an understanding of works of art and their practitioners through an examination of the works in the historical and cultural context in which the art was	Student demonstrates [] ability to	[interpret] works of art in relationship to specific historical and cultural contexts.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
		or is created.					
ARTS	ARTS 2	2. Understand the materials, forms, and/or styles of art through study of arts theories and the works themselves.	Student demonstrates [] ability to	[recognize] significant forms, styles, and modes of works of art.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
ARTS	ARTS 3	3. Understand ideas, materials, technical skills, and forms of art in order to express oneself creatively through an artistic medium.	Student demonstrates [] ability to	[integrate] conceptual, material, and technical skills to create works of art.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
ARTS	ARTS 4	4. Develop tools of aesthetic discourse through contact with works of art – as well as through writings on art – related to its critical understanding, cultural placement, and appreciation.	Student demonstrates [] ability to	[use] established methods of theoretical, formal, historical, institutional, and/or cultural critique.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
HUM	HUM 1	1. Understand the major principles and concepts that form the basis of knowledge in the humanities.	Student demonstrates [] ability to	[understand] the major principles and concepts that form the basis of knowledge in the humanities.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
HUM	HUM 2	2. Understand the theoretical concepts that undergird one or more of the humanities.	Student demonstrates [] ability to	[Understand] the theoretical concepts that undergird one or more of the humanities.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate,	2

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
						Paraphrase	
HUM	HUM 3	3. Develop an awareness of some of the key historical themes of one or more of the humanities.	Student demonstrates [] ability to	[develop] an awareness of some of the key historical themes of one or more of the humanities.	Remembering	Remember, List, Define, State, Repeat, Duplicate	1
HUM	HUM 4	4. Develop an awareness of the multi- or interdisciplinary nature of issues within the humanities.	Student demonstrates [] ability to	[develop] an awareness of the multi- or interdisciplinary nature of issues within the humanities.	Remembering	Remember, List, Define, State, Repeat, Duplicate	1
HUM	HUM 5	5. Develop an awareness of the contexts (historical, social, geographical, moral) in which these issues emerged.	Student demonstrates [] ability to	[develop] an awareness of the contexts (historical, social, geographical, moral) in which these issues emerged.	Remembering	Remember, List, Define, State, Repeat, Duplicate	1
HUM	HUM 6	6. Develop the verbal and written skills to articulate valid arguments on these issues.	Student demonstrates [] ability to	[develop] the verbal and written skills to articulate valid arguments on these issues.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
LANG	LANG 1a	1a. Write with basic proficiency in at least one non-English language.	Student demonstrates [] ability to	[write] in the target language.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
LANG	LANG 1b	1b. Read with basic proficiency in at least one non-English language.	Student demonstrates [] ability to	[read] in the target language.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
LANG	LANG 1c	1c. Listen with basic proficiency in at least one non-English language.	Student demonstrates [] ability to	[understand] spoken language in the target language.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
LANG	LANG 1d	1d. Speak with basic proficiency in at least one non-English language.	Student demonstrates [] ability to	[speak] in the target language.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
LANG	LANG 2	2. Demonstrate an understanding of the people and culture associated with that language.	Student demonstrates [] ability to	[describe] the people and culture associated with the target language	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
LANG	LANG 3	3. Present coherent information and ideas in that language to listeners or readers about the people and culture of that language.	Student demonstrates [] ability to	[present] coherent information and ideas in the target language to listeners or readers about the people and culture of that language.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
WRT	WRT 1a	1a. Research a topic,	Student demonstrates [] ability to	[research] a topic,	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4
WRT	WRT 1b	1b. develop an argument	Student demonstrates [] ability to	[develop] an argument, and	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine,	4

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
						Experiment, Question, Test	
WRT	WRT 1c	1c. organize supporting details.	Student demonstrates [] ability to	[organize] supporting details.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
WRT	WRT 2	2. Produce coherent texts within common college-level written forms.	Student demonstrates [] ability to	[produce] coherent texts within common college-level forms.	Creating	Assemble, Construct, Create, Design, Develop, Formulate, Write	6
WRT	WRT 3	3. Demonstrate the ability to revise and improve such texts.	Student demonstrates [] ability to	[revise] and improve such texts.	Evaluating	Appraise, Argue, Contrast, Defend, Judge, Select, Support, Value, Evaluate	5
CER	CER 1	1. Demonstrate an ability to distinguish among the ethical principles guiding human behavior.	Student demonstrates [] ability to	[identify] and explain a variety of ethical principles guiding human behavior	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
CER	CER 2	2. Apply ethical reasoning to a variety of situations and human experience.	Student demonstrates [] ability to	[apply] ethical reasoning to a variety of situations and interactions.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
CER	CER 3	3. Understand and differentiate ethical, legal, social justice, and political issues.	Student demonstrates [] ability to	[understand] and differentiate ethical, legal, social justice and political issues.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate,	2

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
						Paraphrase	
ESI	ESI 1	1. Locate and organize information from a variety of appropriate sources.	Student demonstrates [] ability to	[identify] and organize a variety of appropriate resources.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
ESI	ESI 2	2. Analyze the accuracy of information and the credibility of sources.	Student demonstrates [] ability to	[analyze] resources for their credibility and identify any possible bias.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4
ESI	ESI 3	3. Determine the relevance of information.	Student demonstrates [] ability to	[critically] select resources that directly relate to concepts, topic and/or research question.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
ESI	ESI 4	4. Use information ethically and responsibly.	Student demonstrates [] ability to	[use] information ethically and responsibly.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
SPK	SPK 1a	1a. Research a topic,	Student demonstrates [] ability to	[research] a topic.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
SPK	SPK 1b	1b. develop an oral argument and	Student demonstrates [] ability to	[develop] an oral argument.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4
SPK	SPK 1c	1c. organize supporting details.	Student demonstrates [] ability to	[organize] supporting details.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
SPK	SPK 2a	2a. Deliver a proficient and substantial oral presentation.	Student demonstrates [] ability to	[deliver] a substantial oral presentation (e.g., 10-15 minutes).	Creating	Assemble, Construct, Create, Design, Develop, Formulate, Write	6
SPK	SPK 2b	2b. Deliver an oral presentation for the intended audience.	Student demonstrates [] ability to	[deliver] an oral presentation for the intended audience.	Creating	Assemble, Construct, Create, Design, Develop, Formulate, Write	6
SPK	SPK 2c	2c. Deliver an oral presentation using appropriate media.	Student demonstrates [] ability to	[deliver] an oral presentation using appropriate media.	Creating	Assemble, Construct, Create, Design, Develop, Formulate, Write	6
SPK	SPK 3	3. Evaluate oral presentations of others according to specific criteria.	Student demonstrates [] ability to	[evaluate] oral presentations of others according to specific criteria.	Evaluating	Appraise, Argue, Contrast, Defend, Judge, Select, Support, Value, Evaluate	5
WRTD	WRTD 1a	1a. Collect the most pertinent evidence,	Student demonstrates [] ability to	[collect] relevant evidence.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine,	4

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
						Experiment, Question, Test	
WRTD	WRTD 1b	1b. draw appropriate disciplinary inferences,	Student demonstrates [] ability to	[draw] appropriate disciplinary inferences.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4
WRTD	WRTD 1c	1c. organize effectively for one's intended audience, and	Student demonstrates [] ability to	[organize] effectively for one's intended audience.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
WRTD	WRTD 1d	1d. write in a confident voice using correct grammar and punctuation.	Student demonstrates [] ability to	[write] in a confident voice using correct grammar and punctuation.	Creating	Assemble, Construct, Create, Design, Develop, Formulate, Write	6
GLO	GLO 1	1. Demonstrate knowledge and understanding of the interconnectedness of the world, past and present.	Student demonstrates [] ability to	[understand] the interconnectedness of the world, past and present.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
GLO	GLO 2	2. Demonstrate knowledge and understanding of a society or culture outside of the United States.	Student demonstrates [] ability to	[understand] a society or culture outside of the United States.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
SBS	SBS 1	1. Understand the major concepts and phenomena that form the basis of	Student demonstrates [] ability to	[understand] the major concepts and phenomena that form the basis of	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate,	2

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
		knowledge in the social sciences.		knowledge in the social sciences.		Recognize, Report, Select, Translate, Paraphrase	
SBS	SBS 2	2. Understand methods of inquiry into the social world and the methods social and behavioral scientists use to explore social phenomena including observation, hypothesis development, measurement and data collection, experimentation, and the evaluation and application of evidence.	Student demonstrates [] ability to	[understand] methods of social science inquiry.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
SBS	SBS 3	3. Understand various types of theory (e.g., behavioral, political, economic, linguistic) that organize predictions and evidence in the social sciences.	Student demonstrates [] ability to	[understand] various types of theory (e.g., behavioral, political, economic, linguistic) that organize predictions and evidence in the social sciences.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
SBS	SBS 4	4. Skillfully interpret and form educated opinions on social science issues.	Student demonstrates [] ability to	[interpret] and form educated opinions on social science issues.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
USA	USA 1a	1a. Demonstrate knowledge and understanding of the rights and responsibilities of citizenship,	Student demonstrates [] ability to	[demonstrate] knowledge and understanding of the rights and responsibilities of citizenship.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
USA	USA 1b	1b. Demonstrate knowledge and understanding of the workings of federal, state, and municipal governments in the United States.	Student demonstrates [] ability to	[demonstrate] knowledge and understanding of the workings of federal, state, and municipal governments in the United States.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
USA	USA 2	2. Demonstrate knowledge and understanding of U.S. history and society.	Student demonstrates [] ability to	[demonstrate] knowledge and understanding of U.S. history and society.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
USA	USA 3	3. Demonstrate knowledge of a subculture or relationships among subcultures within U.S. society.	Student demonstrates [] ability to	[demonstrate] knowledge of a subculture or relationships among subcultures within U.S. society.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
QPS	QPS 1	1. Interpret and draw inferences from mathematical models such as formulas, graphs, tables, or schematics.	Student demonstrates [] ability to	[interpret] and draw inferences from mathematical models such as formulas, graphs, tables, or schematics.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4
QPS	QPS 2	2. Represent mathematical information symbolically, visually, numerically, and verbally.	Student demonstrates [] ability to	[represent] mathematical information symbolically, visually, numerically, and verbally.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
QPS	QPS 3	3. Employ quantitative methods such as algebra, geometry, calculus, or statistics to solve problems.	Student demonstrates [] ability to	[employ] quantitative methods such as algebra, geometry, calculus, or statistics to solve problems.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch,	3

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
						Solve, Use, Schedule	
QPS	QPS 4	4. Estimate and check mathematical results for reasonableness.	Student demonstrates [] ability to	[estimate] and check mathematical results for reasonableness.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Test	4
QPS	QPS 5	5. Recognize the limits of mathematical and statistical methods.	Student demonstrates [] ability to	[recognize] the limits of mathematical and statistical methods.	Evaluating	Appraise, Argue, Contrast, Defend, Judge, Select, Support, Value, Evaluate	5
SNW	SNW 1	1. Understand the methods scientists use to explore natural phenomena including observation, hypothesis development, measurement and data collection, experimentation, and evaluation of evidence.	Student demonstrates [] ability to	[understand] methods of scientific inquiry.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
SNW	SNW 2	2. Understand the natural world and the major principles and concepts that form the basis of knowledge in the natural sciences.	Student demonstrates [] ability to	[understand] the natural world and the major principles and concepts that form the basis of knowledge in the natural sciences.	Understanding	Classify, Describe, Discuss, Explain, Identify, Locate, Recognize, Report, Select, Translate, Paraphrase	2
SNW	SNW 3	3. Assess scientific information and understand the application of scientific data, concepts, and models in the natural sciences.	Student demonstrates [] ability to	[assess] scientific information and understand the application of scientific data, concepts, and models in the natural sciences.	Analyzing	Appraise, Compare, Contrast, Criticize, Differentiate, Discriminate, Distinguish, Examine, Experiment,	4

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
						Question, Test	
SNW	SNW 4	4. Make informed decisions on contemporary issues involving scientific information.	Student demonstrates [] ability to	[make] informed decisions on contemporary issues involving scientific information.	Evaluating	Appraise, Argue, Contrast, Defend, Judge, Select, Support, Value, Evaluate	5
STAS	STAS 1	1. Apply concepts and tools drawn from any field of study in order to understand the links between science or technology and the arts, humanities or social sciences.	Student demonstrates [] ability to	[apply] concepts and tools drawn from any field of study in order to understand the links between science or technology and the arts, humanities or social sciences.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
STAS	STAS 2	2. Synthesize quantitative and/or technical information and qualitative information to make informed judgments about the reciprocal relationship between science or technology and the arts, humanities or social sciences.	Student demonstrates [] ability to	[synthesize] quantitative and/or technical information and qualitative information to make informed judgments about the reciprocal relationship between science or technology and the arts, humanities or social sciences.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3
TECH	TECH 1	1. Demonstrate an ability to apply technical tools and knowledge to practical systems and problem solving.	Student demonstrates [] ability to	[demonstrate] an ability to apply technical tools and knowledge to practical systems and problem solving.	Applying	Choose, Demonstrate, Dramatize, Employ, Illustrate, Interpret, Operate, Sketch, Solve, Use, Schedule	3

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Abbr	LO#	learning outcome	Evaluative criteria A	evaluative criteria B	Cognitive skill	Operational Verbs	Cognitive level
TECH	TECH 2	2. Design, understand, build, or analyze selected aspects of the human-made world. The “human-made world” is defined for this purpose as “artifacts of our surroundings that are conceived, designed, and/or constructed using technological tools and methods.”	Student demonstrates [] ability to	[design, understand, build, or analyze] selected aspects of the human-made world.	Creating	Assemble, Construct, Create, Design, Develop, Formulate, Write	6

Compiling and Interpreting Data

Findings (a) This is the preferred format for departments to provide data. With the following, we can analyze and summarize. Including student ID allows us to cross-walk against bio-demo data of each student or other considerations.

EMPLID	Name	course	Assignment	date	LO1	LO2	LO3
109644242	Joe	WRT 102	portfolio	5-1-2017	5	4	4
110668942	Josephine	WRT 102	portfolio	5-1-2017	4	5	3
108547893	George	WRT 102	portfolio	5-1-2017	3	3	4
109876324	Georgina	WRT 102	Portfolio	5-1-2017	5	5	4

Findings (b) – Using the collected data in findings (a) above, below are two sample summaries of data for inclusion in summary report (example below using fake data)

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SBC objective N=70

Accomplishment level	Or Earned Score	Learning outcome 1	Learning outcome 2	Learning outcome 3
ABSENT 1	< 60	5	1	0
BEGINNING 2	60-90	5	2	3
DEVELOPING 3	70-79	30	40	35
ACCOMPLISHED 4	80-89	25	25	20
EXEMPLARY 5	90-100	5	2	12

Findings (c) (using fake data)

benchmark	70%	70%	70%
meeting	86%	96%	96%
Not meeting	14%	4%	4%

Using Results for Improvement

The planned report for this assessment project will take the form of an executive summary, a few summary tables, followed by a one-page report on each Gen Ed category. The audience of this report will be all-inclusive, ranging from MSCHE to local and SUNY administrators to faculty and departments, as well as anyone who can find the report on our website, where we will publish it. In addition to the report described below, we also hope to develop a set of “dashboards” built with Tableau, but we have not yet begun to develop those enough for me to be able to describe them. Ideally, the dashboards would provide an interactive interface to play around with the data as presented in the planned report described below. Providing the Tableau dashboards would enhance our aim at being transparent.

Executive summary:

The executive summary (approximately one page) will present an overview of the project, the project time line, the methodology, as well as a summary of the intended use of results.

Summary tables:

The summary tables will include the following. [I also really like the summary table from the 2014 UB Gen Ed assessment effort. (General_Education_Assessment_Summary_032414.pdf) If it's not considered plagiarism, I might try to incorporate a table similar to that one too as well as the approaches described below]

Table 1: Overall summary of Gen Ed Assessment results:

Stony Brook Curriculum Objectives	National Survey of Student Engagement	SBU Course evaluations	SUNY Student Opinion Survey	Direct Measurements by Faculty
In this column, we will list the 19 objectives of the Stony Brook Curriculum; Since this project is a work in progress, I present the intentions in this one column rather than listing all 19 objectives.	Data here will represent students responding, “very much” and “quite a bit” from the 2017 survey results. Not all SBC objectives have a relative NSSE area.	Data here will represent students responding “moderate” or higher to two questions included in the course evaluation survey: “How much did you learn from this course?” and “how well did you achieve the learning goal(s) in this course?”	Not sure about this, but I am including it here at the moment. I have not studied the SOS very much yet, but we will include it where it makes sense to do so.	Data from Rubrics. Data here will show the number and % if students evaluated at the mastery level of 3 and higher as defined by the rubric.
SBC 1				
SBC2, etc.				

Table 2: Summary of Local Assessment Points

This table will show the 19 SBC Objectives and the courses used to measure each Objective as well as the n. students evaluated per course and % achieving the outcome.

SBC objective	Abbreviation	Course evaluated	N students evaluated	% acceptable
SBC 1				
SBC 2				
Etc.				

Table 3: Summary of how results are used

SBC objective	Abbreviation	Reported use of results
SBC 1		Text describing the use of results and plans going forward
SBC 2		
Etc.		

One page summary per SBC objective:

The report will include a one-page summary of each SBC objective. Each summary will include the learning outcomes of each Objective, one or two indirect measurements, local findings from the direct assessment including a brief description of the methodology as well as a summary of the results (similar to “findings (c)” above), and a brief description of the planned use of the results. I have included the template of the one-pager below:

[SBC Objective]			
Goal: [text]			
Learning Outcomes:			
[cut/paste learning outcomes from bulletin]			
External or indirect measurement 1 [chart or graph]		External or indirect measurement 2 [chart or graph]	
Local results [direct assessment] Assessment Methods [text] (description of the process)			
Findings [chart and or graph]			
benchmark	70%	70%	70%
meeting	86%	96%	96%
Not meeting	14%	4%	4%
Use of results [text]			