Spring 2023

Stony Brook University General Education Assessment Report

Executive Summary

This report summarizes the findings of an assessment of Stony Brook University's general education curriculum, the Stony Brook Curriculum (SBC). The assessment adopted a mixed methods approach that enabled faculty to summarize direct measurements of student learning with their qualitative feedback. Major findings include:

- All 60 SBC learning outcomes were assessed across 210 SBC course sections
- In all assessed outcomes, 70% of students performed at an acceptable level or better
- 80% of students performed acceptable or better in 16 of the 20 areas assessed
- Highest performing category was SPK while the lowest performing category was WRT
- Approximately 40% of the faculty respondents noted that they planned to make a change for improvement to their SBC course as a result of their participation in the general education assessment initiative.

Purpose and Background

Stony Brook University's General Education Assessment Initiative was jointly conducted by the Office of Educational Effectiveness (OEE) in consultation with the Assessment Council in Spring 2023. The initiative aimed to assess students' progress in achieving the general education (GenEd) student learning outcomes. It included a comprehensive assessment of the curriculum, teaching strategies, and learning outcomes across Stony Brook Curriculum disciplines, with data collected from faculty discussions between April 6 and May 23, 2023. This assessment builds upon an analysis conducted five years earlier (Fall 2017-2019). Previous feedback from faculty indicated the need for a less burdensome approach. Recommendations from the previous assessment report prompted the creation of the General Education Advisory Committee and the Stony Brook University Assessment Council[1], led by faculty members with administrative support. The Assessment Council is charged with overseeing the structure and function of assessment, while the General Education Advisory Committee[2] focuses attention on the purpose of General Education outcomes for student learning, degree progress, and post-graduation outcomes.

Methodology: A New Approach

Leveraging SUNY's update to its general education requirements and student learning outcomes alignment, OEE devised an approach to collect student performance data, designed to minimize faculty burden. This involved collaborative discussions, incorporating insights from key stakeholders such as the Provost's Office, the General Education Advisory Committee, and the Assessment Council. The process included a virtual forum, and email communication with assessment coordinators, which led to individual "guided conversations" with faculty teaching

[1] https:// .stonybrook.edu/commcms/oee/about/Assessment%20Council%20.php
[2] https://www.stonybrook.edu/commcms/oee/about/Gen%20Ed%20Advisory%20Committee.php

general education courses. These conversations were designed to engage faculty and foster understanding of this assessment initiative. Guiding principles of the process are as follows:

- Consider ways to constantly improve our students' educational experience through assessment
- Ensure the assessment approach is in alignment with SUNY and Middle States expectations
- Limit unnecessary or distracting requirements and burdens on units and faculty/staff within those units charged with assessment or teaching general education (GenEd) courses

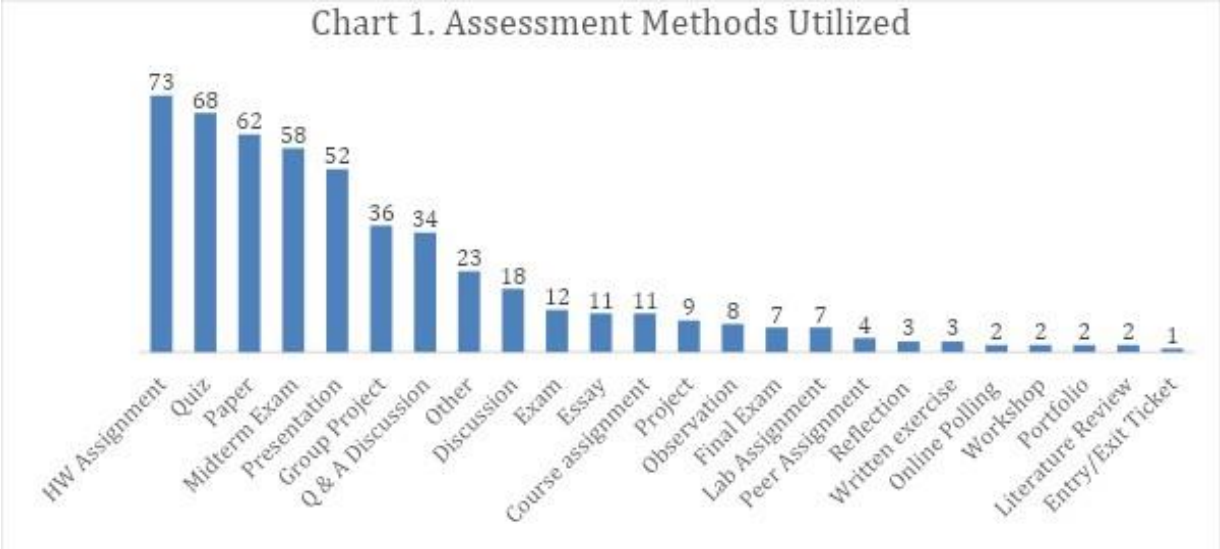
First, OEE provided all of the assessment coordinators responsible for undergraduate programs with a list of faculty teaching general education courses within their department. Coordinators were asked to select five faculty members to participate in the guided conversations. Considering faculty availability, OEE scheduled sessions virtually and in-person with the selected faculty and an assessment consultant.

Within the scope of these 45-minute sessions, the assessment consultant collaborated closely with faculty members to explore course assessment methods, establish alignments between assessment methods and course and/or general education learning outcomes, review syllabi, and distribute student performance across three distinct categories: "Developing," "Acceptable," and "Exemplary." Faculty were asked to consider the following:

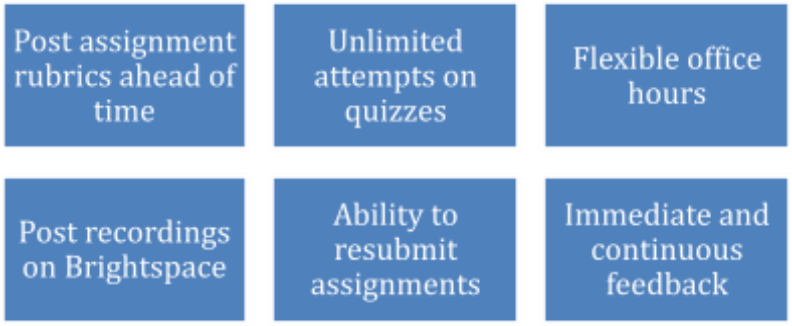
Think about a typical college-educated person who is not a major in this subject or general area.

- How many of your students would you say are Developing?
- How many of your students would you say are Acceptable?
- How many of your students would you say are Exemplary?

Participating faculty provided counts relating to student performance in each of the distinct categories. Faculty were asked to discuss assessment methods that best aligned with student learning outcomes. Chart 1 is a visualization of the full distribution of the methods mentioned during the guided conversations. The top three assessment methods were homework assignments, quizzes, and papers.



Additionally, faculty were asked to describe actions implemented to improve student performance in areas where faculty saw room for growth. Although several actions were offered, faculty actions generally encompassed the following:



Assessment consultants entered data provided by faculty into a customized content management system developed by OEE. After the conversation, faculty received a personalized summary report outlining outcome assessed, methods used, actions taken to assist students, and results of student performance.

Findings/Analysis

Data from the assessment initiative covered 20 Stony Brook Curriculum (SBC) categories, including 60 learning outcomes[3], 210-course sections, 39,612 duplicated students assessed, and insights from 107 faculty members. OEE examined the samples within each SBC category and estimated an average 4.4% margin of error based on 95% confidence level and maximum comparison variance (see Appendix A for a detailed analysis). Each SBC category, excluding WRT, had more than one department represented in the data. The SBC with the most

[3] https://www.stonybrook.edu/commcms/gened/SLOs.php

departments was ESI: Evaluate Synthesizing Information (see Table 1). For a full breakdown, view Appendix B.

Table 1.

SBC	Department	Count
ESI	Art	1
	Computer Science	1
	Environmental Studies	1
	Health Administration	1
	Philosophy	1
	Undergraduate Biology	1
	Dean's Office Arts and Science	1
	Educ Programs, College of Busi	1
	History	1
	Sociology	1
	Women's,Gender,&Sexuality Stud	2

Chart 2 groups students collectively, distributing performance into three performance categories where in total 84% (n=33,140) of duplicated students demonstrated "Acceptable" or "Exemplary" performance.

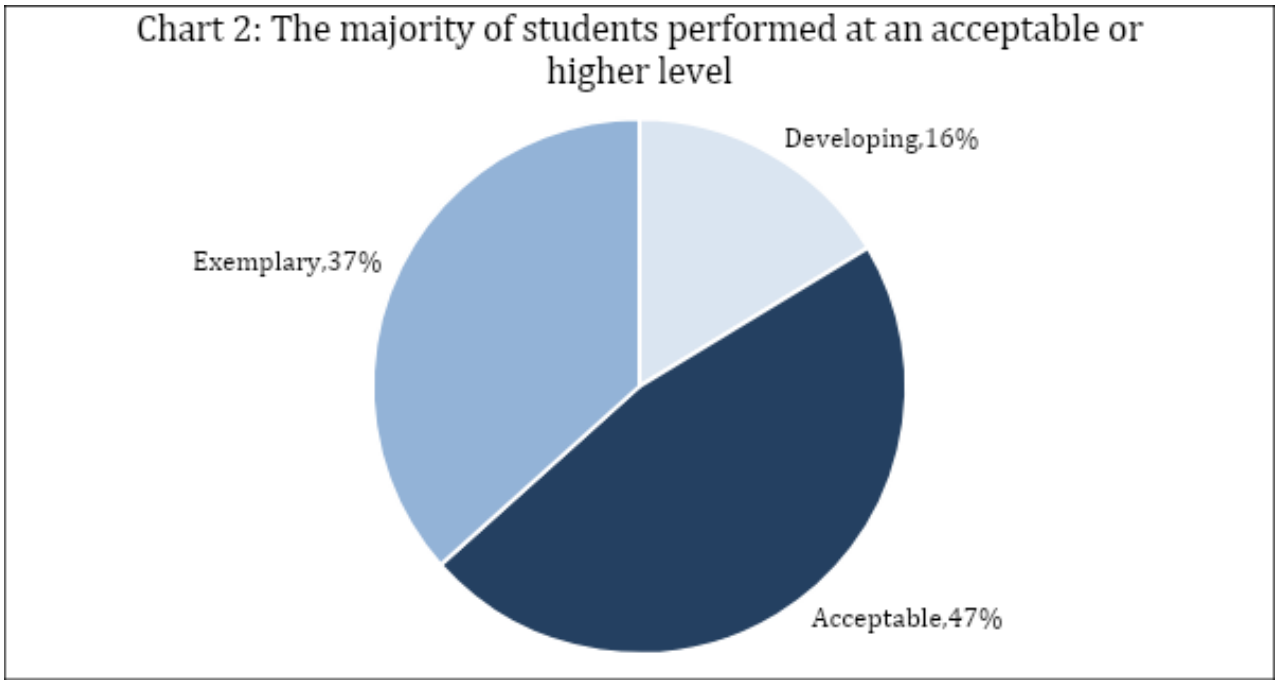


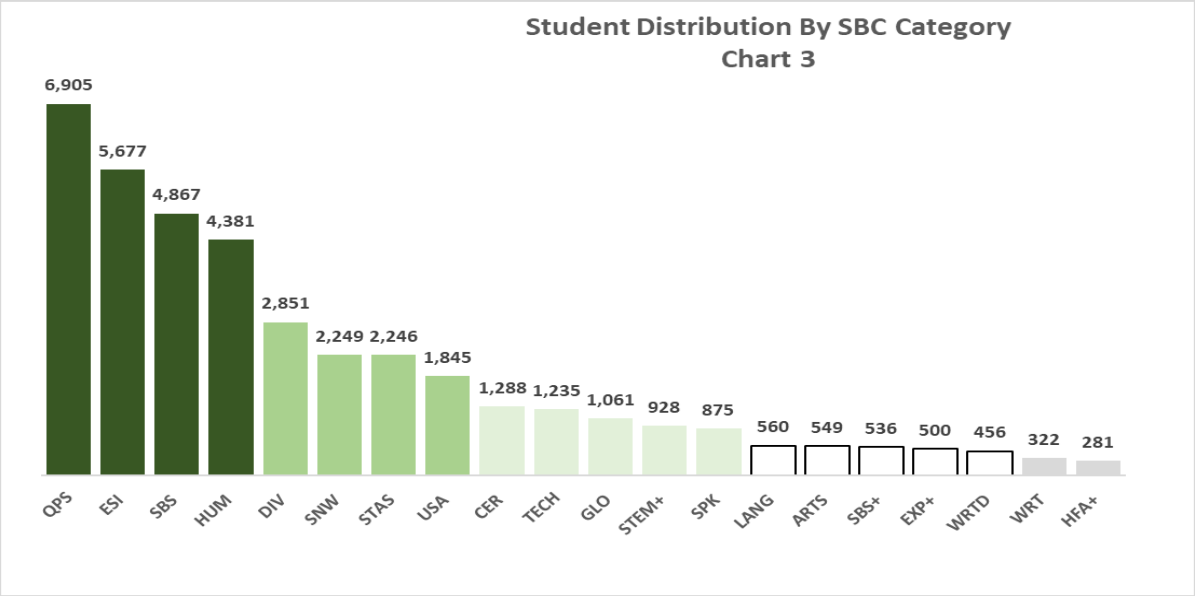
Table 2 represents student performance within the twenty SBC categories that fall within GenEd. Looking at all 20 categories at least 68% of students performed at acceptable or higher level. Notably, in 16 of the 20 categories, 80% or more of the students assessed performed at an acceptable or higher level. A comparative ranking of the SBC categories revealed that the top five categories were SPK, WRTD, HFA+, EXP+ and CER. Although the SPK category had 97.7% of student performance as acceptable or higher, the smaller sample size denotes a potential higher margin of error due to insufficient representation (see Appendix A for detailed information).

The lowest two categories, WRT and STEM+, indicate that 70% or fewer of the assessed students are performing at an acceptable or exemplary level. Faculty members participating in the STEM+ SBC category have noted that the rigor of coursework affects students who are assessed as acceptable or exemplary. Additionally, faculty often report that students taking entry-level or lower-level writing courses within the WRT category encounter some difficulty in synthesizing sourced information to draw comprehensive conclusions in their written arguments. Faculty indicated they have implemented various actions to help students improve their performance, including working one-on-one with students, scaffolding projects, using low-stakes assessment methods, providing prompt and continuous feedback, implementing peer-review assignments, and offering extra credit to students who work with tutors in either the Writing Center or various science and math centers. Appendix C contains a table with detailed performance data for student learning outcomes.

Table 2: A clear trend emerged. The majority of students achieved "**Acceptable**" or "**Exemplary**" performance levels.

SBC	N Sample	N Course	N Faculty	% Acceptable +	% Developing	% Acceptable	% Exemplary
SPK	875	13	10	97.70%	2.30%	41.30%	56.50%
WRTD	456	16	12	94.30%	5.70%	55.90%	38.40%
HFA+	281	11	10	89.00%	11.00%	48.00%	40.90%
EXP+	500	6	6	88.60%	11.40%	42.00%	46.60%
CER	1,288	9	8	87.40%	12.60%	36.80%	50.60%
HUM	4,381	7	7	87.30%	12.70%	64.10%	23.20%
DIV	2,851	11	11	86.90%	13.10%	56.60%	30.30%
ARTS	549	6	5	86.90%	13.10%	26.40%	60.50%
USA	1,845	7	6	86.80%	13.20%	59.60%	27.30%
LANG	560	9	6	86.60%	13.40%	49.60%	37.00%
TECH	1,235	14	13	86.10%	13.90%	39.00%	47.00%
GLO	1,061	10	9	84.60%	15.40%	36.60%	48.10%
SBS	4,867	16	11	83.70%	16.30%	48.60%	35.10%
ESI	5,677	12	12	83.50%	16.50%	48.50%	34.90%
SBS+	536	12	11	82.60%	17.40%	42.70%	39.90%
SNW	2,249	16	10	82.50%	17.50%	49.40%	33.20%
QPS	6,905	10	6	79.30%	20.70%	36.10%	43.30%
STAS	2,246	9	9	77.60%	22.40%	36.20%	41.40%
STEM+	928	9	8	70.70%	29.30%	54.20%	16.50%
WRT	322	7	4	68.30%	31.70%	34.50%	33.90%

Chart 3 demonstrates the distribution of measurements by SBC area. The largest SBC category, QPS: Quantitative Problem Solving, assessed almost seven thousand students.



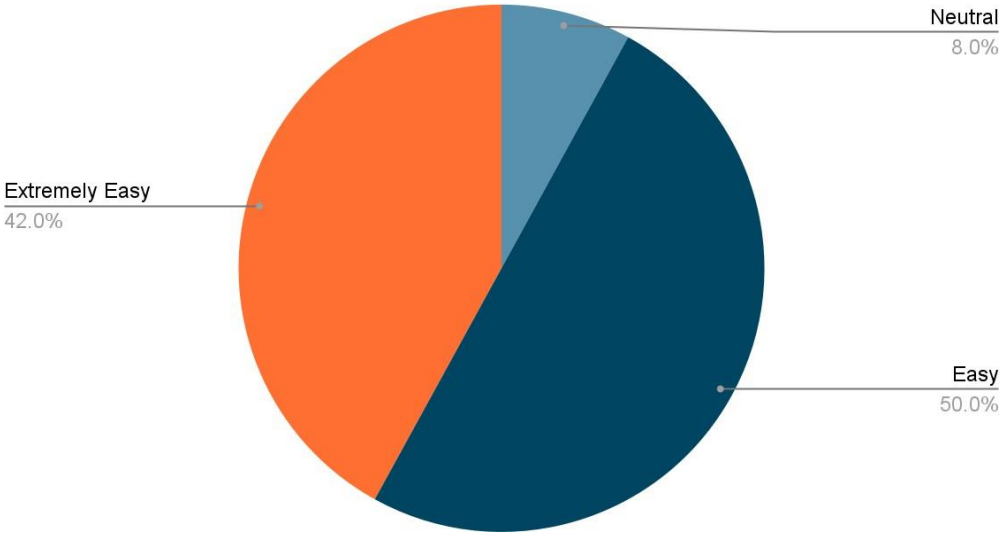
Throughout the guided conversations, faculty practices revealed in-depth insights into how to enhance student learning. These encompassed transparency in grading criteria, continuous feedback, reviewing content during class, varying assessment methods, and fostering peer-led feedback and collaborative learning. These practices highlight our faculty's commitment to enriching the learning experience of our students.

Assessing the Assessment

In order to assess the effectiveness of the Spring 2023 General Education Assessment Initiative, the OEE distributed an anonymous feedback survey to all faculty who participated in the guided assessment conversations in May 2023. The survey was distributed for two reasons: 1) to give participants the opportunity to reflect on their perceptions of the assessment initiative and 2) to compare those reflections to those of the prior assessment report.

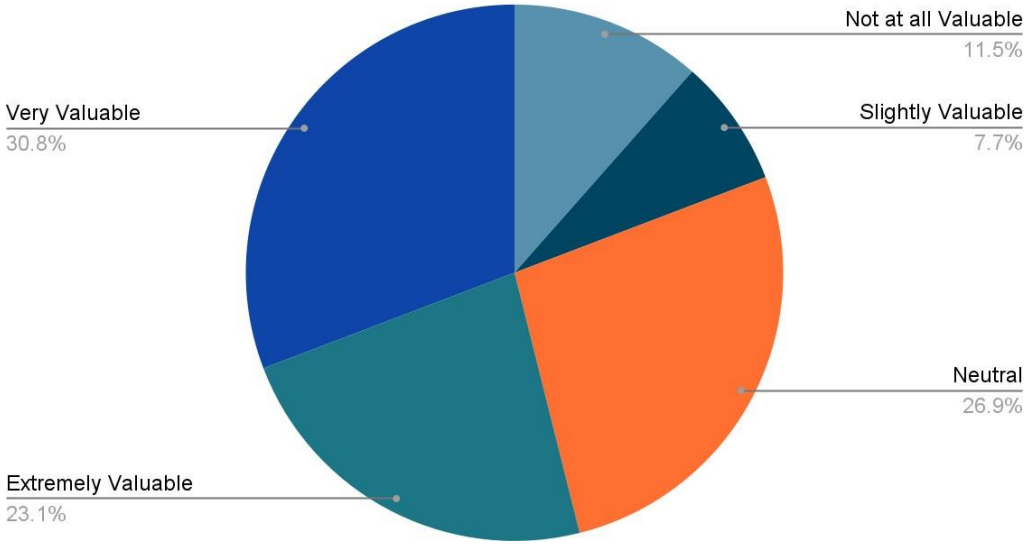
Feedback from the survey (response rate of 26%) revealed evolving perceptions of the assessment initiative's value. Results reported herein reflect the responses received as of this date, although the survey will remain open and accessible to participants through September 2023 to collect as much feedback as possible. Faculty members expressed improved positivity after engaging in guided assessment conversations. A majority rated the initiative as valuable and indicated their intent to implement changes based on their experiences. Valuable insights were generated, such as reservations about the purpose of general education and suggestions for improvement in preliminary instructions.

Chart 4: Faculty Perception-Initiative Participation



In Chart 4, 92% of respondents felt this initiative was "easy" or "extremely easy" after reflecting on their meeting.

Chart 5: Value of the Assessment Process



In Chart 5, respondents had varied opinions on the value of the assessment initiative, although more than half of participants found value in this assessment process.

Approximately 40% of the faculty respondents noted that they planned to make a change or improvement to their SBC course as a result of their participation in the general education assessment initiative. For example, some noted that they intended to clarify the alignment of general education student learning outcomes (SLOs) to their specific assignments by revising the way they are worded. Others noted that they would incorporate more variety in assessment methods to provide students with the opportunity to demonstrate their proficiency in a given

SLO in a different way. Others found it a helpful exercise to refresh their course SLOs within the broader context of the general education SLOs.

Limitations

During the implementation of this initiative, some limitations were identified which influenced the process and data components.

First, one limitation that emerged was that not all courses were required to assess every learning outcome assigned to their respective SBC category. In such instances, only a subset of the designated learning outcomes was assessed, potentially leading to incomplete representations of the overall educational outcome categories. Furthermore, certain learning outcomes were changed over time, either due to modifications in the course curriculum or variations in faculty instruction.

Second, a critical limitation highlighted during the assessment pertained to departmental variation in the use of PeopleSoft to manage teaching and course assignment. As a result, discrepancies occasionally arose in the information listed within the database. For example, PeopleSoft listed a specific instructor, but in conversation with the faculty member, the assessment consultant discovered the faculty member was responsible for teaching a different course section. In such cases, manual corrections were required to rectify discrepancies in the data. While these inconsistencies were minimal, they must be considered while interpreting the findings derived from the research study.

Finally, several faculty members expressed concerns that the timing of the initiative coincided too closely with the end of the semester when they were preoccupied with final exams and graduation-related commitments. For some, this affected availability and may have impacted faculty participation.

Impact and Future Steps

The use of guided conversations with faculty as a mixed-methods approach to assessment has enriched the assessment process. The General Education Assessment Initiative yielded valuable insights into the strengths and areas for improvement within the general education curriculum. Additionally, connecting through these conversations, we identified faculty who offered best practices to improve student performance and engage in continuous assessment. We look forward to inviting these faculty members to collaborate in future workshops and share their strategies with the wider faculty community.

Subsequent assessment initiatives may benefit from the following:

- Encourage courses assigned to specific SBC categories to assess all designated learning outcomes.
- Create a workshop in conjunction with CELT, Academic Affairs, and GEAC to educate faculty on the purpose of GenEd, how to align assignments with student learning outcomes, how to assess learning outcomes, and understand the steps involved to certify and/or change a GenEd course.
- Host an open assessment period allowing instructors to input assessment data as early as the beginning of the semester and as late as the end of semester.

- Consider creating an institutional benchmark to measure growth over time and accurately determine success.

The recommendations outlined in this summary will guide the University's efforts to continuously improve its general education program, ensuring it remains responsive to the evolving needs of our students and their impact on the global society.

Appendix A

Title: SBC General Assessment Initiative Margin of Error

Spring 2023 SBC Courses				Spring 2023 SBC Assessment								
SBC	N Enrollment	N Courses	% of Enrolled	N Course Sample	N Enrollment	N Enrollment Sample*	% of Available SBC Courses	% of Available SBC Course Enrollment	% of Sample	% Difference of Sample	+/- error Based on # of Students Sampled	Selection Weight
ARTS	2,679	68	3.3%	6	189	147	8.8%	5.5%	1.1%	-2.2%	7.86%	2.91
CER	4,338	92	5.4%	9	564	480	9.8%	11.1%	3.7%	-1.6%	4.22%	1.44
DIV	5,127	79	6.3%	11	897	723	13.9%	14.1%	5.6%	-0.7%	3.38%	1.13
ESI	3,894	93	4.8%	12	1,632	1,438	12.9%	36.9%	11.2%	6.3%	2.05%	0.43
EXP+	3,365	686	4.2%	6	135	127	0.9%	3.8%	1.0%	-3.2%	8.53%	4.22
GLO	3,341	72	4.1%	10	653	532	13.9%	15.9%	4.1%	0.0%	3.90%	1.00
HFA+	2,973	115	3.7%	11	389	281	9.6%	9.5%	2.2%	-1.5%	5.56%	1.69
HUM	3,823	81	4.7%	7	997	813	8.6%	21.3%	6.3%	1.6%	3.05%	0.75
LANG	2,012	90	2.5%	9	219	188	10.0%	9.3%	1.5%	-1.0%	6.81%	1.71
QPS	4,060	38	5.0%	10	1,592	1,435	26.3%	35.3%	11.1%	6.1%	2.08%	0.45
SBS	7,483	53	9.3%	16	1,957	1,330	30.2%	17.8%	10.3%	1.1%	2.44%	0.90
SBS+	6,656	102	8.2%	12	651	536	11.8%	8.1%	4.2%	-4.1%	4.06%	1.98
SNW	6,493	53	8.0%	16	853	664	30.2%	10.2%	5.2%	-2.9%	3.60%	1.56
SPK	2,854	138	3.5%	13	306	294	9.4%	10.3%	2.3%	-1.3%	5.41%	1.55
STAS	3,882	61	4.8%	9	1,239	1,133	14.8%	29.2%	8.8%	4.0%	2.45%	0.55
STEM+	6,480	67	8.0%	9	1,077	928	13.4%	14.3%	7.2%	-0.8%	2.98%	1.11
TECH	3,320	63	4.1%	14	698	631	22.2%	19.0%	4.9%	0.8%	3.51%	0.84
USA	3,005	31	3.7%	7	723	630	22.6%	21.0%	4.9%	1.2%	3.47%	0.76
WRT	2,178	87	2.7%	7	163	112	8.0%	5.1%	0.9%	-1.8%	9.02%	3.10
WRTD	2,807	131	3.5%	16	492	456	12.2%	16.2%	3.5%	0.1%	4.20%	0.98
Grand Total	80,770	2,200	100%	210	15,426	12,878	-	-	100%	0.0%	-	-

***Unique students**

Appendix B

Title: The number of departments represented per SBC category

SBC	Department	Count
ARTS	Art	5
	English	1

SBC	Department	Count
CER	Africana Studies	1
	Computer Science	1
	English	1
	European Languages	1
	Respiratory Care Program	1
	Women's,Gender,&Sexuality Stud	1
	Dean's Office Arts and Science	1
	Educ Programs, College of Busi	1
	Journalism Program	1

SBC	Department	Count
EXP+	School of Social Welfare	1
	Women's,Gender,&Sexuality Stud	2
	Computer Science	1
	Journalism Program	2

SBC	Department	Count
GLO	Asian & Asian-American Studies	2
	English	1
	History	3
	Political Science	1
	Dean's Office Arts and Science	1
	Linguistics	1
	School of Social Welfare	1

SBC	Department	Count
HUM	English	1
	Music	1
	Philosophy	1
	Women's,Gender,&Sexuality Stud	1
	Asian & Asian-American Studies	1
	Dean's Office Arts and Science	1
	European Languages	1

SBC	Department	Count
DIV	Educ Programs, College of Busi	1
	Music	1
	Respiratory Care Program	1
	Women's,Gender,&Sexuality Stud	4
	Hispanic Languages	1
	History	1
	Linguistics	2

SBC	Department	Count
ESI	Art	1
	Computer Science	1
	Environmental Studies	1
	Health Administration	1
	Philosophy	1
	Undergraduate Biology	1
	Dean's Office Arts and Science	1
	Educ Programs, College of Busi	1
	History	1
	Sociology	1
	Women's,Gender,&Sexuality Stud	2

SBC	Department	Count
HFA+	Art	1
	English	1
	European Languages	1
	Music	1
	MFA in Film	1
	SH Creative Writing MFA	2
	Women's,Gender,&Sexuality Stud	3
	Writing Program	1

SBC	Department	Count
LANG	Asian & Asian-American Studies	2
	European Languages	2
	Hispanic Languages	3
	Linguistics	2

SBC	Department	Count
SBS	Africana Studies	1
	Asian & Asian-American Studies	1
	Economics	1
	History	1
	Journalism Program	3
	Political Science	1
	Anthropology	1
	Dean's Office Arts and Science	1
	Linguistics	6

SBC	Department	Count
SPK	Art	1
	Dept of Clinical Labatory Sci	2
	School of Social Welfare	1
	Women's,Gender,&Sexuality Stud	1
	Computer Science	4
	Dean's Office Arts and Science	1
	School of Nursing	3

SBC	Department	Count
SBS+	Asian & Asian-American Studies	1
	Computer Science	1
	Economics	3
	Music	1
	Psychology	1
	History	1
	Journalism Program	1
	Linguistics	2
	School of Social Welfare	1

SBC	Department	Count
SNW	BS/HS Program	1
	Chemistry	3
	Dept of Clinical Labatory Sci	1
	Environmental Studies	1
	Physics and Astronomy	5
	Geosciences	1
	Linguistics	4

SBC	Department	Count
QPS	Mathematics	4
	Technology and Society	1
	Applied Mathematics and Stat	5

SBC	Department	Count
STAS	Computer Science	1
	Music	1
	Political Science	1
	Technology and Society	1
	Undergraduate Biology	1
	Environmental Studies	2
	Linguistics	1
	School of Social Welfare	1

SBC	Department	Count
STEM+	Anthropology	2
	BS/HS Program	1
	Applied Mathematics and Stat	1
	Dept of Clinical Labatory Sci	1
	Educ Programs, College of Busi	1
	Linguistics	1
	Undergraduate Biology	2

SBC	Department	Count
TECH	Applied Mathematics and Stat	1
	Art	1
	Computer Science	3
	Educ Programs, College of Busi	1
	Mechanical Engineering	1
	Respiratory Care Program	1
	Chemical Engineering	2
	Geosciences	1
	School of Nursing	2
	Technology and Society	1

SBC	Department	Count
USA	Africana Studies	1
	Journalism Program	3
	Music	1
	Respiratory Care Program	1
	Linguistics	1

SBC	Department	Count
WRT	Writing Program	7

SBC	Department	Count
WRTD	Dept of Clinical Labatory Sci	1
	Economics	2
	Health Administration	1
	Journalism Program	1
	School of Social Welfare	2
	Women's,Gender,&Sexuality Stud	1
	Computer Science	4
	Dean's Office Arts and Science	1
	Educ Programs, College of Busi	1
	SH Creative Writing MFA	2

Appendix C

Title: Overview of the SBC categories and corresponding learning outcomes assessed.

SBC	N Courses	N Enrollment	N Sample	Learning Outcomes	Developing	Acceptable	Exemplary
ARTS Fine & Performance	6	189	146	ARTS - 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.	21.2%	23.3%	55.5%
			147	ARTS - 2. Understand the materials, forms, and/or styles of art through study of arts theories and the works themselves.	5.4%	32.7%	61.9%
			109	ARTS - 3. Understand ideas, materials, technical skills, and forms of art in order to express oneself creatively through an artistic medium.	19.3%	27.5%	53.2%
			147	ARTS - 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.	8.2%	22.4%	69.4%
	Total		**549**				
CER Critical & Ethical Reasoning	9	564	331	CER - 1. Demonstrate an ability to distinguish among the ethical principles guiding human behavior.	11.2%	34.7%	54.1%
			477	CER - 2. Apply ethical reasoning to a variety of situations and human experience.	13.0%	35.0%	52.0%
			480	CER - 3. Understand and differentiate ethical, legal, social justice, and political issues.	13.1%	40.0%	46.9%
	Total		**1,288**				
DIV Diversity	11	897	713	DIV - 1. Describe and analyze the impact of power and privilege on self and society in the context of diversity and inclusion.	13.5%	56.8%	29.7%
			723	DIV - 2. Identify systematic barriers to equality and inclusiveness and discuss how those barriers and biases affect the perceptions of others.	12.2%	59.5%	28.4%
			714	DIV - 3. Examine how human and cultural similarities and differences shape personal identities and influence structural and institutional inequities.	14.4%	54.9%	30.7%
			701	DIV - 4. Critically reflect upon how one's own personal and cultural presuppositions affect one's values and relationships.	12.3%	55.3%	32.4%

	Total			**2,851**				
ESI Evaluate & Synthesize Research Information	12	1,632		1,438	ESI - 1. Locate and organize information from a variety of appropriate sources.	16.6%	51.3%	32.2%
				1,400	ESI - 2. Analyze the accuracy of information and the credibility of sources.	21.9%	42.1%	35.9%
				1,434	ESI - 3. Determine the relevance of information.	16.5%	46.9%	36.5%
				1,405	ESI - 4. Use information ethically and responsibly.	11.1%	53.7%	35.2%
	Total			**5,677**				
EXP+ Experiential Learning	6	135		127	EXP+ - 1. Demonstrate interpersonal competency (e.g. teamwork, communication, collaboration, etc.), including relationships with faculty advisor(s), on-site supervisor(s)/ mentor(s), team members and/or the broader community that is impacted by the project	6.3%	19.7%	74.0%
				122	EXP+ - 2. Apply knowledge and skills gained through coursework to a real-world situation.	18.0%	27.9%	54.1%
				127	EXP+ - 3. Appraise the personal, academic, and/or professional effects before, during, and after the applied learning experience through deep and sustained reflection.	3.1%	79.5%	17.3%
				124	EXP+ - 4. Apply feedback on performance promptly and productively.	18.5%	40.3%	41.1%
	Total			**500**				
GLO Engage Global Issues	10	653		529	GLO - 1. Demonstrate knowledge and understanding of the interconnectedness of the world, past and present.	19.7%	36.5%	43.9%
				532	GLO - 2. Demonstrate knowledge and understanding of a society or culture outside of the United States.	11.1%	36.7%	52.3%
	Total			**1,061**				
HFA+ Humanities & Fine Arts	11	389		281	HFA+ - 1. Students must use the skills expected from their Versatility courses to study and practice them in greater depth, with further study applied to the area in which they are certified.	11.0%	48.0%	40.9%
	Total			**281**				
HUM Humanities	7	997		684	HUM - 1. Understand the major principles and concepts that form the basis of knowledge in the humanities.	11.4%	61.3%	27.3%
				638	HUM - 2. Understand the theoretical concepts that undergird one or more of the humanities.	15.5%	66.1%	18.3%
				680	HUM - 3. Develop an awareness of some of the key historical themes of one or more of the humanities.	10.3%	63.4%	26.3%

				783	HUM - 4. Develop an awareness of the multi- or interdisciplinary nature of issues within the humanities.	11.7%	66.2%	22.1%
				783	HUM - 5. Develop an awareness of the contexts (historical, social, geographical, moral) in which these issues emerged.	12.0%	65.9%	22.1%
				813	HUM - 6. Develop the verbal and written skills to articulate valid arguments on these issues.	15.3%	61.9%	22.9%
	Total			**4,381**				
LANG Foreign Language	9	219		187	LANG - 1. Write, read, listen and speak with basic proficiency in at least one non-English language.	15.5%	55.6%	28.9%
				188	LANG - 2. Demonstrate an understanding of the people and culture associated with that language.	8.5%	53.2%	38.3%
				185	LANG - 3. Present coherent information and ideas in that language to listeners or readers about the people and culture of that language.	16.2%	40.0%	43.8%
	Total			**560**				
QPS Quantitative Problem Solving	10	1,592		1,435	QPS - 1. Interpret and draw inferences from mathematical models such as formulas, graphs, tables, or schematics.	18.7%	38.4%	42.9%
				1,343	QPS - 2. Represent mathematical information symbolically, visually, numerically, and verbally.	20.5%	22.9%	56.7%
				1,396	QPS - 3. Employ quantitative methods such as algebra, geometry, calculus, or statistics to solve problems.	18.4%	31.3%	50.3%
				1,399	QPS - 4. Estimate and check mathematical results for reasonableness.	27.2%	40.4%	32.4%
				1,332	QPS - 5. Recognize the limits of mathematical and statistical methods.	18.4%	47.3%	34.3%
	Total			**6,905**				
SBS Social Sciences	16	1,957		1,330	SBS - 1. Understand the major concepts and phenomena that form the basis of knowledge in the social sciences.	18.3%	42.0%	39.8%
				1,302	SBS - 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 of evidence.	17.4%	49.4%	33.2%
				985	SBS - 3. Understand various types of theory (e.g., behavioral, political, economic, linguistic) that organize predictions and evidence in the social sciences.	20.6%	46.8%	32.6%
				1,250	SBS - 4. Skillfully interpret and form educated opinions on social science issues.	9.5%	56.4%	34.1%

	Total			**4,867**				
SBS+ Social & Behavioral Sciences	12	651		536	SBS+ - 1. Students must use the skills expected from their Versatility courses to study and practice them in greater depth, with further study applied to the area in which they are certified.	17.4%	42.7%	39.9%
	Total			**536**				
SNW Study Of the Natural World	16	853		527	SNW - 1. Understand the methods scientists use to explore natural phenomena including observation, hypothesis development, measurement and data collection, experimentation, and evaluation of evidence.	16.1%	59.6%	24.3%
				664	SNW - 2. Understand the natural world and the major principles and concepts that form the basis of knowledge in the natural sciences.	24.4%	45.2%	30.4%
				610	SNW - 3. Assess scientific information and understand the application of scientific data, concepts, and models in the natural sciences.	11.1%	46.4%	42.5%
				448	SNW - 4. Make informed decisions on contemporary issues involving scientific information.	17.4%	47.5%	35.0%
	Total			**2,249**				
SPK Speak Effectively Before An Audience	13	306		294	SPK - 1. Research a topic, develop an oral argument and organize supporting details.	2.0%	41.8%	56.1%
				293	SPK - 2. Deliver a proficient and substantial oral presentation for the intended audience using appropriate media.	2.0%	36.2%	61.8%
				288	SPK - 3. Evaluate oral presentations of others according to specific criteria.	2.8%	45.8%	51.4%
	Total			**875**				
STAS Relationships Between Science or Technology And the Arts, Humanities, Or Social Sciences	9	1,239		1,133	STAS - 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.	21.5%	39.6%	38.8%
				1,113	STAS - 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.	23.4%	32.7%	43.9%
	Total			**2,246**				
STEM+ Science, Technology, Engineering, & Math	9	1,077		928	STEM+ - 1. Students must use the skills expected from their Versatility courses to study and practice them in greater depth, with further study applied to the area in which they are certified.	29.3%	54.2%	16.5%
	Total			**928**				

TECH Technology	14	698		604	TECH - 1. Demonstrate an ability to apply technical tools and knowledge to practical systems and problem solving.	12.9%	44.9%	42.2%
				631	TECH - 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 m	15.6%	33.4%	51.7%
	Total			**1,235**				
USA US History	7	723		604	USA - 1. Demonstrate knowledge and understanding of the rights and responsibilities of citizenship, and the workings of federal, state, and municipal governments in the United States.	14.1%	59.3%	26.7%
				611	USA - 2. Demonstrate knowledge and understanding of U.S. history and society.	12.8%	62.0%	25.2%
				630	USA - 3. Demonstrate knowledge of a subculture or relationships among subcultures within U.S. society.	12.7%	57.5%	29.8%
	Total			**1,845**				
WRT Writing	7	163		106	WRT - 1. Research a topic, develop an argument and organize supporting details.	35.8%	33.0%	31.1%
				104	WRT - 2. Produce coherent texts within common college-level written forms.	35.6%	31.7%	32.7%
				112	WRT - 3. Demonstrate the ability to revise and improve such texts.	24.1%	38.4%	37.5%
	Total			**322**				
WRTD Writing Intensive	16	492		456	WRTD - 1. Collect the most pertinent evidence, draw appropriate disciplinary inferences, organize effectively for one's intended audience, and write in a confident voice using correct grammar and punctuation.	5.7%	55.9%	38.4%
	Total			**456**				
Total	**210**	**15,426**		**39,612**				