

**Science and Mathematics Department**  
**Student Learning Outcomes**  
**Assessment Report**

**AY 2017–2018**

Prepared by Daniel Jordan

Science & Mathematics Assessment Committee:  
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1. Department Name

Science and Mathematics

2. List your major degree programs (including concentrations)

Major: Art and Materials Conservation, BA

Minor: Biology

Environmental Studies

Mathematics

LAS Core: Science

Science with Lab

Mathematics

3. What specific degree programs and program learning outcomes did you assess in the last academic year?

Having completed the first complete cycle of assessing the LAS Core objectives over the previous three academic years, the main focus for assessment in 2017–18 was to reflect on the results of those activities to both better document the impact of our assessment efforts on departmental practices and to evaluate the process and framework.

We also assessed the developmental mathematics program (Basic Math Skills). The outcome of the developmental mathematics program is: “Upon successful completion of a developmental mathematics course, students should have the mathematical skills needed to succeed in their chosen college-level mathematics course.”

The major in Art and Materials Conservation continued collecting data as described in previous reports (e.g., results on nationally standardized exams, evidence from internship supervisor’s reports), with the goal of accumulating data for later analysis.

4. Describe the methods you used.

Data pertaining to the developmental program were collected by Institutional Effectiveness. Specifically, the committee was provided with a database which included all students who had taken Basic Math Skills (which does not satisfy the Core mathematics requirement) and then a subsequent MA-credit course between fall 2014 and fall 2016, their grades in both courses, and the length of time between completing Basic Math and the MA-credit course. The data were then cleaned to remove duplicates and to remove data for a few students who took Basic Math Skills as an elective after having already completed an MA-credit course. The resulting data set represented 511 students and their grades in their final attempt taking Basic Math Skills and their first attempt taking a MA-designated course.

In order to evaluate and improve the process of assessing the Core objectives, during the fall 2017 semester, the Assessment Committee developed a survey (see appendix) to distribute to faculty. This survey had two goals: to invite faculty input on the assessment process and to solicit examples of specific ways in which assessment has impacted the department. The survey was designed to be completed anonymously. To help further ensure that faculty would feel free to express their opinions, the committee obtained IRB approval for the study. Tim McCaskey and Julie Minbrole—two members of the committee who do not serve as coordinators of part-time faculty—were named as the investigators for the study and were responsible for the IRB proposal and data collection. The survey was distributed to departmental faculty during the spring 2018 semester.

## 5. What were your results?

### Developmental mathematics results

Institutional Effectiveness collected data on the performance of Basic Math Skills in preparing students for a MA-bearing mathematics course. The basic metric was the pass rate, defined as follows: of those students who passed Basic Math Skills and who subsequently took a 1000-level MA-credit course between fall 2014 and fall 2016, the pass rate is the percentage who passed the MA-bearing class with a letter grade of D or better or with a P, as opposed to failing, withdrawing, or being marked as no-show (F, W, or NS).

Institutional Effectiveness made some initial observations about the data. The overall average grade in Basic Math is a B and most students pass. The average grade in the subsequent MA-credit course is about a C, with the grade in Basic Math having little correlation with the grade in the MA course. The time between completing Basic Math and taking the MA-credit course does not seem to affect pass rate, nor does student classification (freshman, junior, etc.). Note that the data provided by Institutional Effectiveness include only those students who have taken a MA-designated course. Students who have not passed Basic Math Skills or who completed Basic Math but have not taken a subsequent mathematics course were not included.

The data provided by Institutional Effectiveness were cleaned to represent students' final attempt at Basic Math Skills and first attempt at a MA-credit course. In particular, students whose first attempt at an MA-credit course resulted in an F or W were counted as not passing, even if they retook an MA-designated course and received a passing grade. Also removed from the data was one student who did not pass Basic Math but still did take a MA-credit course (presumably through retaking a placement exam), one student who enrolled in two different MA-credit courses simultaneously and withdrew from one of them, and eleven students who took Basic Math Skills as an elective having previously or simultaneously enrolled in a MA-credit course.

The pass rates (with 95% confidence intervals) in MA-bearing courses of students who completed Basic Math Skills between fall 2014 and fall 2016 were:

- College Mathematics:  $91.9 \pm 3.0\%$  (285/310); 4.5% fail, 3.6% withdraw
- Liberal Arts Mathematics:  $71.0 \pm 8.6\%$  (76/107); 19.6% fail; 9.4% withdraw
- Quantitative Reasoning:  $81.7 \pm 7.86\%$  (78/93); 11.8% fail; 6.5% withdraw

The overall pass rate across all MA-bearing courses for Basic Math Skills students was  $85.6\% \pm 3.0\%$ .

Similar data were reported on in the department's 2012–13 assessment report. At that time, the number of Basic Math Skills students who went on to Liberal Arts Mathematics or Quantitative Reasoning was too low to draw meaningful conclusions (31 and 12 students, respectively). This was partly because those courses were new to the curriculum. The percentage of students who completed Basic Math Skills and then passed College Mathematics at that time was 86.2%, although it is important to note that the 2012–13 data were filtered by placement exam results and did not include students who took Basic Math Skills despite having a placement test score sufficient to register for an MA-credit course without completing Basic Math.

One question the committee had was whether the accelerated pace of summer classes would have a detrimental impact on the passing rate for students who had completed Basic Math Skills. The pass rate for students who took the MA-bearing class during summer is 82.3% (28/34), compared to 86.0% (410/477) for those who took the MA-bearing class during a regular 15-week semester. This difference is not statistically significant ( $p = 0.281$ ).

The table and graph below compare students' grades in Basic Math Skills to their combined pass rate for all MA-bearing classes.

<i>Grade in Basic Math</i>	<i>Number</i>	<i>Number Passing</i>	<i>Pass Percentage</i>
A	109	104	95.4%
A-	66	59	89.4%
B+	73	64	87.7%
B	82	75	91.5%
B-	51	41	80.4%
C+	40	28	70.0%
C	51	43	84.3%
C-	23	16	69.6%
D	15	8	53.3%

Basic Math grade points versus pass rate

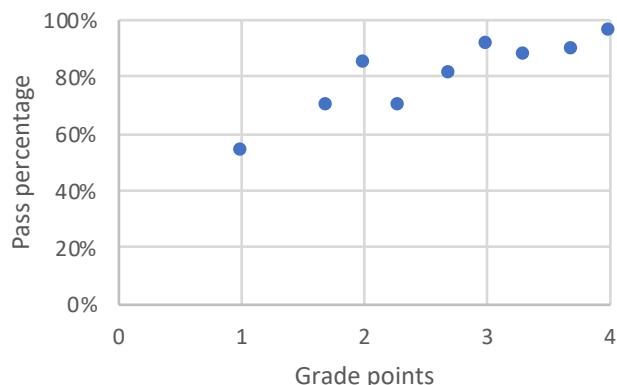


Figure 1: Comparison between grade in Basic Math Skills and pass rate in subsequent MA course

### Faculty survey results

Twenty-six faculty responded to the survey, including six who were currently or recently members of the Assessment Committee. The survey was distributed to 69 faculty, indicating a response rate of 38%. However, only 55 of those invited were teaching during the semester the survey was disseminated, so the response rate of those reasonably expected to reply is as high as 47%.

Of the 26 respondents, 19 (73%) had previously collected assessment data from at least one of their classes. Many of the questions regarding evaluating the assessment process were presented to this group only.

Of the 19 respondents who had participated in data collection, 15 (79%) reported finding it easy or very easy to choose the assignment with which to assess students. Only 4 respondents reported this task as difficult, and none indicated it was very difficult. This came as a bit of a surprise, since, anecdotally, most of the conversations that Assessment Committee members had with faculty during the process were focused on working with faculty members in choosing an appropriate assignment. Also, most of the respondents (14, or 74%) reported the assessment process having taken them less than 3 hours, and only 2 indicated that it took more than 5 hours to complete.

The survey included two questions—one multi-select from a list of options and one open-ended—that asked respondents about what was effective and what could be improved in how the assessment committee facilitated data collection. From both questions, it is clear that respondents most valued direct contact with members of the Assessment Committee, especially face-to-face conversations. The comments provided in relation to this topic were all positive, including “they are doing [an] excellent job” and “they are making that as seamless as one can reasonably expect.” There were, among the 15 comments, only 3 suggestions, all of them constructive and useful. Two of those comments suggested face-to-face interactions between committee members and faculty with one requesting consideration of part-time faculty members’ schedules and the other requesting training “to understand the goals and end products of the assessment, and how my participation would help the mission.” The third constructive comment suggested providing an example of a scored assignment.

The 19 respondents who had previously collected data for assessment were also asked to agree or disagree with the statement, “The rubrics were clear and understandable.” All 19 indicated that they agree (16) or strongly agree (3). An open-ended follow-up question asked those who disagreed or strongly disagreed with the statement to provide more information. While no respondents disagreed, two did comment, with one

writing, "Sometimes it's hard to note differences between 'meets' and 'exceeds.'"

Less than 40% (7) of the 19 respondents who had previously collected data selected the committee's Moodle-based assessment hub as "helpful in the assessment process." This is disappointing, particularly in light of the fact that the Moodle-based site has been our primary focus for inviting faculty participating in discussions of data interpretation and action. Similarly, in a question asked of all respondents about ways in which faculty get information about assessment, 50% (13 of the 26 respondents) selected "Moodle or another site." Email and "talking with other faculty members" appear to be much more effective at communicating about assessment, with 18 (69%) and 15 (58%) respondents selecting those methods. Disappointingly, 4 (15%) of the respondents reported not recalling having received any information about assessment. Two of those four made comments in other questions that seemed to indicate confusion between assessment of student learning and evaluation of faculty performance.

All 26 respondents were asked, "Do you feel the Science and Mathematics departmental assessment process is of value to you?" Over 65% (17 of the 26) responded Yes, 6 (23%) chose Unsure, while only 3 indicated No. One of those who responded No made comments in the open-ended follow-up question that indicated they were thinking about evaluation of faculty, rather than learning outcomes assessment. Of the 16 faculty who made comments in the open-ended follow-up, 4 discussed assessment's value in helping faculty "focus on the desired outcomes." Two faculty indicated that department-level assessment of learning outcomes helped them improve class-level assessment. And 5 mentioned that they valued assessment's potential for improving teaching effectiveness.

All 26 respondents were also asked about specific ways in which the department's assessment efforts have impacted their personal teaching and student learning in their classes. This topic was probed twice, once with a fully open-ended question and then, later in the survey, with a multi-select question with an open-ended follow-up providing space to elaborate on the choices. In the multi-select question, just over a quarter (27% or 7 of the 26 respondents) indicated that they did not make any modifications to their course. The "Made other change" option was selected by 5 (or 19%) of the faculty, the options "Modified test questions" and "Added or deleted course content" were both selected by 6 (23%), and the "Modified grading rubric/expectations" option was selected by 7 (27%) of the respondents. The most-chosen option was "Modified assignments and/or lab exercises," which was selected by 17 of the 26 respondents (65%). A bit surprisingly, the data do not seem to indicate any relationship between having participated in data collection and having made changes to one's classes or teaching methods, although self-selection bias may be a significant factor here. The table below compares the percentages of respondents in each group who selected each of the options.

	<i>Have not collected data (n=7)</i>	<i>Have collected data (n=19)</i>
<i>Modified test questions</i>	29%	21%
<i>Modified assignments and/or lab exercises</i>	57%	68%
<i>Modified grading rubric/expectations</i>	29%	26%
<i>Added or deleted course content</i>	29%	21%
<i>Made other change</i>	43%	11%
<i>Didn't modify anything</i>	29%	26%

*Figure 2: Comparison of course modifications by faculty who have and have not collected data*

The open-ended question and the open-ended follow-up to the multi-select question both received numerous comments. The completely open-ended question, which appeared first, asked "How has assessment, either through reading forum posts about the results and recommendations or through participating in data collection, influenced your teaching and your students' learning?" Of the 26 total respondents, 22 entered

responses to this question, though 4 of those were negative (e.g., “Not much” or “It hasn’t”) and 2 of the comments indicated the writer was focused on evaluation of faculty performance, meaning that 16 of the 26 faculty who completed the survey (62%) wrote a response indicating that a positive change occurred in their classes as a result of assessment. Seven of the comments were non-specific, although three of those seemed to indicate that the faculty member was benefitting from the Assessment Committee’s recommendations or from the forum posts in which faculty members collecting data describe their assignment (e.g., “If something seems to have a positive effect it is worth trying in my class.”)

Two faculty members, in responding to the open-ended question, indicated that the assessment process helped them to better communicate with students about expectations or refine the rubrics they use in their classes. One respondent wrote that assessment “helped me put into words things I was already doing,” and two others made similar comments. This is useful as confirmation that the committee succeeded in developing outcomes statements and rubrics that accurately represent what faculty in the department view as important in our disciplines. The only significant theme apparent in the responses to the open-ended question was that the assessment process encouraged faculty to more fully align their courses with the program outcomes. Six faculty members’ comments were along these lines, with three having commented about changes to course content and three others mentioned changes to assignments (including labs and exams).

The responses to the open-end follow-up to the multi-select question, “What types of changes, if any, have you made to your courses as a result of the assessment process?” tended to be much more specific, but along the same lines, as the question just discussed. Specific changes included modifying labs, adding or revising questions, increasing focus on quantitative analysis or evaluation of outside source materials, adjusting course content, and modifying exams. Two instructors mentioned adopting pedagogical innovations as a result of assessment—specifically, beginning each class with a “critical analysis” of an article found in the popular press, and pre-lab activities “to help in understanding of content prior to setting up the lab.” Three faculty members described increasing clarity of expectations, with one specifically mentioning using the rubrics to have a discussion with the class about expectations and goals.

## 6. How were the results disseminated?

A summary of the data on the developmental mathematics assessment was posted to the Moodle-based Assessment portal and distributed to all departmental faculty. The Moodle site also provided all faculty in the department with opportunities to comment on and participate in the interpretation of the results.

To keep the department-wide discussion focused on teaching and learning, rather than process, the results from the survey were not disseminated to the department with the developmental mathematics data. Those data were instead discussed within the Assessment Committee and are now available to the entire department as part of this report.

## 7. How were the results interpreted by the department?

### **Developmental mathematics results**

The discussion among the Assessment Committee members and feedback from faculty—in person, by email, and via Moodle—indicated that department faculty are generally satisfied with the results. There is, of course, always room for improvement, but none of the data are alarming and the overall pass rate of 85% is satisfactory, particularly in comparison to a combined 87% pass rate for all students for College Mathematics, Liberal Arts Mathematics, and Quantitative Reasoning (based on data independently collected by Eunju Sohn for the fall 2015 to fall 2017 semesters).

Several faculty, in reference to the perceived difference in pass rates between courses, cautioned that the data must be kept in perspective. In particular, the much smaller numbers of students who take Liberal Arts Mathematics or Quantitative Reasoning after completing Basic Math Skills make those percentages more variable. And even beyond the calculated margin of error, the sample sizes are sufficiently small that the non-

experimental nature of the study may be accentuating that variability.

One possible contributor to the variation in pass rates that was suggested by a faculty member commenting on the data is that sections of College Mathematics typically fill to capacity before the other two courses. This may mean that a greater proportion of students with financial holds or other reasons to register late take Liberal Arts Mathematics and Quantitative Reasoning. If so, the differences in pass rate between the courses may be more a result of non-academic risk factors than the ability of Basic Math to prepare students. This is worth investigating in the future and, if true, there may be appropriate interventions the college can pursue.

On the other hand, the differences in pass rates are consistent with differences in course content. Historically, Basic Math Skills was specifically designed alongside College Mathematics to include content designed to prepare students for that course. The table below compares the major topics covered in College Mathematics, Liberal Arts Mathematics, and Quantitative Reasoning. The topics listed in bold font are those which Basic Math specifically aims to help prepare students (table adapted from course comparison document prepared by course coordinators).

<i>Topic</i>	<i>College Mathematics</i>	<i>Liberal Arts Mathematics</i>	<i>Quantitative Reasoning</i>
<b><i>Problem-solving techniques</i></b>	X	X	X
<b><i>Proportions &amp; percents</i></b>	X	X	X
<b><i>Linear equations (<math>y = mx + b</math>)</i></b>	X	X	X
<b><i>Linear inequalities</i></b>	X	X	
<b><i>Graphing functions</i></b>	X		X
<b><i>Unit conversions</i></b>	X		X
<b><i>Basic interest calculations</i></b>	X		X
<b><i>Geometry (perimeter/area/ volume)</i></b>	X		
<b><i>Trigonometry</i></b>	X		
<b><i>Scientific notation</i></b>	X		
<b><i>Exponents and logarithms</i></b>	X		
<b><i>Counting techniques</i></b>		X	X
<b><i>Probability</i></b>		X	X
<b><i>Factoring expressions</i></b>		X	
<b><i>Venn diagrams</i></b>		X	
<b><i>Logical truth and deduction</i></b>		X	
<b><i>Personal finance</i></b>			X
<b><i>Basic statistics</i></b>			X

Figure 3: Comparison of content of Basic Math Skills (bold topics) with three most popular MA courses

The table above makes it apparent that, in terms of specific content, Basic Math Skills is designed to best prepare students for College Mathematics. The assessment data make clear that students who complete Basic Math Skills take College Mathematics at a much higher rate than either of the other two courses (approximately 60% versus 18% and 21% for Liberal Arts Mathematics and Quantitative Reasoning). As long as

this holds true, it is likely best to keep the curriculum of Basic Math as is. If Basic Math students begin taking the other courses in larger numbers, it may become appropriate to modify the Basic Math Skills content.

The graph in Figure 1 comparing students' grades in Basic Math Skills with pass rate in the MA-credit courses suggests an upward trend, as would be expected. That the pass rate for students with a D in Basic Math Skills is substantially below 70% is of concern.

One faculty member suggested analyzing the data after filtering out students who were not required to take Basic Math based on their placement data. This was done in the previous assessment of the developmental program. However, the current data span a time frame during which the mathematics placement instrument was in flux, so including placement scores as a variable in this particular data set would have been misleading. This faculty member also suggested gathering demographic information on the students, including major, age, gender, and ethnicity. These are all worth considering when the developmental mathematics program is next assessed.

### **Faculty survey results**

Department faculty members are generally satisfied with the assessment process and recognize its value. Moreover, despite the inherent selection bias in a survey of this nature, the response rate was substantial and there is clear evidence that instructors in the department are making use of assessment data and assessment-related activities (e.g., assessment as a vehicle for sharing teaching ideas) to improve individual classes. These improvements have ranged from adjusting course curricula, to introducing new class activities, to enhancing assignments (including labs and exams). It is particularly clear that, in stark contrast with the course-content focused improvements that resulted from assessment prior to our shift to a program-oriented model, adjustments are being made to ensure courses align with program outcomes.

One significant concern raised by the survey results is that there are still faculty who conflate assessment with evaluation of faculty performance. It is our stance that data on student performance collected as part of learning outcomes assessment should not be used to evaluate faculty. Communicating this clearly and repeatedly is essential to ensuring faculty participation.

Another point raised during the survey that deserves attention is that the rubrics do not always clearly delineate between "meets expectations" and "exceeds expectations."

Results from the survey question about how easy or difficult it was to select an assignment indicate that the department's practice of assigning Assessment Committee members to specific faculty to support them through the data collection is highly effective. And the fact that the vast majority reported that the entire process took less than 3 hours is very gratifying, since one of the committee's goals had been to design a process that was not overly time-consuming for faculty members.

The constructive suggestions offered regarding the assessment process, particularly those asking for more opportunities for one-on-one interactions, were very welcome. The low number of faculty who indicated that the Moodle-based assessment site has been useful was instructive. The committee has been disappointed with the relatively low participation in the Moodle forums for discussing results and sharing ideas for improvement. The survey results suggest that Moodle has not been an entirely effective mechanism for actively involving faculty in these processes, and we need to find better ways to invite faculty participation.

## 8. What impact will the results have on curriculum and other programmatic activities?

### **Developmental mathematics impact**

The results on the assessment of Basic Math Skills suggest two action items and some questions for future investigation.

First, the pass rate for students receiving a D in Basic Math Skills is concerning (see Figure 1). Even though the number of students is so small that the margin of error is substantial, the trend in the data across grades

suggests that the pass rate in MA-credit course for students earning a D in Basic Math is below 70%. To address this, the coordinator of Basic Math Skills will work with Student Support Services and/or Advising and will routinely communicate with these students to encourage them to seek learning support.

Second, the proportion of students who complete Basic Math and subsequently enroll in College Mathematics compared to Liberal Arts Mathematics and Quantitative Reasoning should be routinely monitored. If these proportions substantially shift, the curriculum of Basic Math Skills may need adjustments.

When the developmental program is next assessed, placement scores should be reintroduced as a variable. Moreover, once a meaningful number of students have been placed into and complete mathematics courses on the basis of the recently adopted Accuplacer system, the Assessment Committee should investigate the accuracy of those placement results.

Additional questions for future developmental mathematics assessment include the effect of demographic variables (e.g., age, gender, and ethnicity). It would also be interesting to investigate outcomes for students who take Basic Math Skills as their first mathematics course but later complete courses beyond College Mathematics, Liberal Arts Mathematics, and Quantitative Reasoning (e.g., students pursuing BS degrees).

### **Faculty survey impact**

The main result of the survey is confirmation that the assessment process is resulting in faculty making changes to courses in a variety of ways to ensure that courses are aligned with departmental and program objectives in addition to course-specific objectives.

The most immediate change has been slight revisions to the rubrics for the first outcomes for each of Science (SC/SL) and Mathematics (MA) to clarify the distinction between meets and exceeds expectations. After faculty have collected data with these rubrics and provided feedback, the committee will revise the other rubrics.

The college's decision to no longer support Moodle means that a new departmental assessment portal must be developed. Survey results provide some guidance in this process, and, as we look towards data collection and analysis during the 2018–19 academic year, the survey results will inform efforts to involve faculty.

Appendix  
Faculty Survey



## Informed Consent Form

Consent Form for Participation in a Research Study

**Title of Research Project:** Assessing a departmental assessment process

**Principal Investigators:** Timothy McCaskey, PhD, and Julie Minbile, PhD

Associate Professors, Columbia College Chicago

**Faculty Advisor:** N/A

**Chair of Thesis Committee:** N/A

### INTRODUCTION

You are invited to participate in a research study to reflect on the assessment process in the Science and Mathematics Department. This consent form will give you the information you will need to understand why this study is being done and why you are being invited to participate. It will also describe what you will need to do to participate and any known risks, inconveniences or discomforts that you may have while participating. You are encouraged to think this over. You are also encouraged to ask questions now and at any time. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. This process is called 'informed consent.' You will receive a copy of this form for your records.

You are being asked to participate because you have, as a faculty member in the department, participated in departmental assessment or been invited to read and participate in our online forums.

### PURPOSE OF THE STUDY

The purpose of this research study is to answer the following questions: (1) How have faculty (if at all) modified their teaching and courses in response to assessment data and (2) How can we improve the assessment process, including but not limited to the learning outcomes and assessment rubrics?

### PROCEDURES

If you agree to participate in this study, you will be asked to do the following:

- Click the e-mail link inviting you to take the survey. If you are reading this, you have already accomplished this.
- Complete the survey. We are asking you to answer questions about the degree of your participation in the assessment process, how useful it was to you, and whether or not there are ways we can improve either the rubrics or phrasing of our learning objectives.
- Surveys will be conducted during February 2018. No follow-up survey is anticipated at this time.

## **POSSIBLE RISKS OR DISCOMFORTS**

The risk(s) in this study is(are):

- The survey should take less than ten minutes to complete.
- We believe there are no known risks associated with this research study other than the possible inconvenience of the time it takes to participate in the study.

## **POSSIBLE BENEFITS**

The possible benefits of being in this study:

You may not directly benefit from this study; however, data gathered from this survey will hopefully make our assessment process smoother and more useful to the faculty. We also have evidence that participating in assessment benefits both our teaching and student learning, so any process that benefits assessment abstractly can benefit faculty and students concretely.

## **CONFIDENTIALITY**

Confidentiality means that the investigator will keep the names and other identifying information of the research participants private. The investigator will change the names and identifying information of research participants when writing about them or when talking about them with others, such as the investigator's supervisors.

- We have designed this survey (using SurveyMonkey) to work anonymously. Participants will not give their names, and the survey is not linked to anyone's email account.
- No participant names will be used in analysis or presentation of the data.
- There are free-response questions in the survey, and the only risk to confidentiality is if you choose to identify yourself.

The following procedures will be used to protect the confidentiality of your information:

1. The survey data will be collected anonymously via SurveyMonkey. The survey link is sent out identically to all potential participants, and your responses (or refusal to participate) will not be connected to you in any way.
2. Survey responses will be shared only with other members of the departmental Assessment Committee for analysis. Files are shared via a password-protected site.
3. If a participant chooses to identify him/herself, such responses will be de-identified before sharing with others.
4. At the end of this study, the researchers may publish their findings. You will not be identified in any publications or presentations.

## **RIGHTS**

Being a research participant in this study is voluntary. You may choose to withdraw from the study at any time without penalty. You may also refuse to participate at any time without penalty.

Thoughtfully consider your decision to participate in this research study. We will be happy to answer any question(s) you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Timothy McCaskey (312-369-7765), ([tmccaskey@colum.edu](mailto:tmccaskey@colum.edu)). If you have any questions concerning your rights as a research subject, you may contact the Columbia College Chicago Institutional Review Board (IRB) staff at 312-369-8795 or [IRB@colum.edu](mailto:IRB@colum.edu).

## **COST OR COMMITMENT**

- There are no additional costs or payments associated with completing the survey.
- The survey should take under ten minutes to complete.

## **COMPENSATION FOR ILLNESS AND INJURY**

If you agree to participate in this study, your consent in this document does not waive any of your legal rights. However, in the event of harm arising from this study, neither Columbia College Chicago nor the researchers are able to give you money, insurance, coverage, free medical care or any other compensation injury that occurs as a result of the study. For this reason, please consider the stated risks of the study carefully.

**PARTICIPANT STATEMENT**

This study has been explained to me. I volunteer to take part in this research. I have had opportunity to ask questions. If I have questions later about the research or my rights as a research participant, I can ask one of the contacts listed above. I understand that I may withdraw from the study or refuse to participate at any time without penalty.

\* 1. Please choose one to continue:

- I have read the informed consent statement, volunteer to participate, and wish to continue to the survey.
- I have read the informed consent statement but refuse to participate.

## Science and Mathematics Assessment Survey

### Initial Questions

2. Do you feel the Science and Mathematics departmental assessment process is of value to you?

- Yes
- No
- Unsure

Please explain your answer

3. Which of these methods have you used to gain information or communicate about the assessment process? Check all that apply.

- Email
- Moodle or another site
- Talking with members of the assessment committee
- Talking with other faculty members
- I do not recall receiving any information about the assessment process

4. How has assessment, either through reading forum posts about the results and recommendations or through participating in data collection, influenced your teaching and your students' learning?

\* 5. Have you participated in data collection for the assessment process?

- Yes
- No

# Science and Mathematics Assessment Survey

## Questions on Data Collection

For the following questions, please think about when you have participated in data collection.

6. How easy was it to choose an assignment or item to use in the assessment process?

- Very easy
- Easy
- Difficult
- Very difficult

7. How much extra time did the assessment process take?

- < 1 hour
- 1–3 hours
- 3–5 hours
- > 5 hours

8. Which of the following were helpful in the assessment process? (Check all that apply.)

- Email from assessment committee
- Conversation with assessment committee member
- Conversation with colleagues
- Instructions/forum posts on Moodle
- Rubric provided

9. How else can the assessment committee help facilitate the data collection process?

10. Please respond to the following statement. "The rubrics were clear and understandable."

- Strongly agree
- Agree
- Disagree
- Strongly disagree

If you responded "disagree" or "strongly disagree," what was least clear and understandable about the rubrics?

## Science and Mathematics Assessment Survey

### Final Questions

11. What types of changes, if any, have you made to your courses as a result of the assessment process?

- Modified test questions
- Modified assignments and/or lab exercises
- Modified grading rubric/expectations
- Added or deleted course content
- Made other change
- Didn't modify anything

Please provide more detail about any changes you made.

12. Is there anything else about the assessment process that you'd like to add?