

June 29, 2017

Dear Colleagues,

I hope you are enjoying your summer. I am writing to update you on the activities of the Educational Policy and Planning Committee (EPPC) of Arts and Sciences in the 2016-2017 academic year, as well as the planning for the upcoming academic year. The purpose of the EPPC is to coordinate educational policy across the schools that make up Arts and Sciences. Most of the work of the EPPC is carried out in subcommittees that report back to the full EPPC for discussion of their findings, progress and recommendations. We regularly provide updates on the activities of the EPPC for wider discussion in faculty meetings, in meetings with department chairs, institute and center directors, and in meetings of the directors of undergraduate and graduate studies.

I am grateful for the support that many students, faculty members and administrators provided in carrying out the work of the EPPC, and in offering their valuable time in service of our educational programs. I am especially grateful to Rose Razaghian for serving as the administrative foundation of EPPC, to David Helfand, Greg Wawro, Michele Moody-Adams, Rosalind Morris, and Josh Whitford for chairing EPPC subcommittees, and the entire EPPC membership for their devoted service to strengthen our educational programs in Arts and Sciences.

In addition, I would like to alert you that I have completed my service as chair of EPPC, and am pleased to report that Michele Moody-Adams will serve as the next EPPC chair. I look forward to seeing these critical topics move ahead under her leadership.

Below, I provide updates on the topics discussed by EPPC this year. I invite you to provide feedback on the recommendations through the regular communications channels with EPPC, or directly to me. This year, EPPC has developed several recommendations, and we look forward to hearing your comments on them. A brief summary appears below, followed by a more detailed description.

It has been a pleasure working with so many of you on these topics over the last two years. I wish you an enjoyable and productive summer.

Sincerely,

Brent R. Stockwell

Chair, EPPC

Professor

Departments of Biological Sciences and Chemistry

Executive Summary of EPPC Activities and Recommendations

Teaching Evaluations in Promotion and Hiring Decisions (chaired by Brent Stockwell)

The subcommittee concluded that there is no need to alter the current balance among teaching, research and service that forms the basis for hiring and promotion decisions, but there are opportunities to further articulate current standards in teaching excellence. The recommendations include that departments articulate their vision of exemplary teaching and reflect on their approaches to documenting teaching excellence, and that the administration communicate consistently regarding Arts and Sciences' teaching values and policies, and incentivize professional development effort.

Innovative Practices in Teaching and Learning (chaired by David Helfand)

The subcommittee's principal goal was to understand how to make faculty members aware of new strategies to improve students' learning experiences and learning outcomes and to encourage and support faculty in embracing experimentation and change. The subcommittee plans to recommend that resources be provided so that departments and individual faculty members have the opportunity to develop new teaching strategies, that there is a need to better connect the Center for Teaching and Learning (CTL) with faculty members in Arts and Sciences, and that new spaces should take active learning strategies into account in their design.

Instructional Staffing and Scheduling (chaired by Michele Moody-Adams)

The subcommittee found that most students are taught by a significant number of Arts and Sciences faculty, both ladder-rank faculty and full-time lecturers, in line with disciplinary standards in higher education. While there is no excessive use of adjunct teaching, course-offering units rely on the expertise of adjuncts on topics that are critical for students. The subcommittee recommends that there be full collaboration with PPC and Arts and Sciences to support the PPC's upcoming study of lecturers in discipline, that Arts and Sciences should consider conducting an informal survey of each unit's practices regarding hiring and review of adjuncts, as well as developing, in collaboration with departments, a comprehensive handbook for adjunct faculty, and that faculty members should schedule teaching in ways that minimize peak-time clustering.

Class Size and Education (chaired by Gregory Wawro)

The subcommittee considered the impact of class size on students' educational experiences and the need for Teaching Assistants, as well as general best practices for mounting Arts and Sciences classes. The subcommittee's recommendations include policies for setting enrollment caps, broadening the pool of available teaching assistants to meet demand, improvements to classroom infrastructure, and limits on the number of courses for which students can register.

Course Evaluations (chaired by Joshua Whitford)

The subcommittee established guidelines under which course evaluation responses, at the request of a faculty member, can be withheld from publication in Vergil on grounds of bias. After the conclusion of the two-year pilot to publish evaluation results, the subcommittee recommends that faculty be allowed continue to opt out of publication of evaluation results on a course-by-course basis. The subcommittee also proposed a change in the timeline for course evaluations that will allow students to submit evaluations any time between the last week of classes and, most likely, the grading deadline (they will, however, be unable to see their final grade before completing course evaluations or opting out).

Detailed Description of EPPC Activities and Recommendations

The EPPC Subcommittee on Teaching Evaluations in Promotion and Hiring Decisions (chaired by Brent Stockwell) was established this year to examine how teaching factors into hiring and promotion in Arts and Sciences. The subcommittee concluded that the current weighting of teaching within the standards for tenure and promotion should not be adjusted, but found there is a need to articulate current standards, to clear up confusion among departments and faculty members about the place teaching holds among the criteria for hiring and promotion, to offer recommendations on how to improve the visibility and quality of teaching and to articulate how information about teaching is communicated to hiring and promotion committees. EPPC thus recommends that excellence in teaching be emphasized at all ranks of the ladder faculty. The goal of these recommendations is to recognize and highlight the excellent teaching found within Arts and Sciences, not to alter the current balance among teaching, research and service that forms the basis for hiring and promotion decisions. Thus, the EPPC subcommittee on Teaching Evaluations in Promotion and Hiring Decisions recommends the following: *(a) departments articulate their vision of exemplary teaching, (b) departments reflect on their approaches to documenting teaching excellence, (c) the administration communicate consistently regarding Arts and Sciences' teaching values, (d) Arts and Sciences recognize and incentivize professional development efforts and (e) the administration provide uniform guidance on the role of teaching in hiring and promotion to department chairs.* The proposal was discussed and approved by the full EPPC. The complete proposal is attached at the end of this letter.

The Subcommittee on Instructional Staffing and Scheduling (chaired by Michele Moody-Adams) was asked to explore the development of guidelines to help support and strengthen the staffing and scheduling efforts of course-offering units in Arts and Sciences. The subcommittee met four times during the spring of 2017 to discuss five topics—(A) the distribution of class meeting times, (B) the distribution of instructor types across class offerings, (c) the hiring and review of adjunct instructors, (d) the processes through which instructional units, and their faculty, submit curricular information to the registrar and (E) methods for assessing unmet course demand. The subcommittee considered a wide range of relevant statistical data about classes, instructors and students, and also devoted a large portion of the final meeting to a conversation with the registrar. In addition, the subcommittee chair met with representatives of Columbia College, General Studies and the registrar, and reported back on the substance of these meetings. Taking these deliberations and discussions into account, the subcommittee made the following recommendations to EPPC and the faculty of Arts and Sciences:

A. DISTRIBUTION OF CLASS MEETING TIMES. The subcommittee was mindful of the fact that, a few years back, the Classroom Committee formulated a detailed set of guidelines meant to assist course-offering units in making scheduling decisions that would minimize the problem of “bunching” during peak times in the official schedule. There is evidence that some units have taken these guidelines very seriously. But a number of our course-offering units do not seem to have done so yet. Thus, the subcommittee recommends that *(1) every course-offering unit should have a curriculum committee that meets at least twice a year to consider how its courses are distributed across officially available course times in the Schedule of Classes, and (2) each unit's curriculum committee should seek to avoid the clustering of too many of its courses during peak times, particularly the 10:10 and 11:40 times, and (to a lesser extent) the 2:10 and 2:40 times. Each course-offering unit should be supplied a yearly report showing the actual distribution of class times for the unit. Faculty members and units could then be encouraged to design their teaching schedules in ways that minimize peak-time clustering.*

B. THE DISTRIBUTION OF INSTRUCTOR TYPES ACROSS CLASS OFFERINGS. The subcommittee looked at data that helped provide a good general picture of the distribution and an understanding of just how complex it is. But it was clear that this complexity is a function of the very different kinds of courses that

students take. The data showed that, in general, most students are taught by a significant number of ladder-rank faculty over the course of their careers in Arts and Sciences programs. Moreover, the data also revealed that when students are taught by non-ladder rank faculty, current practices are very much in line with relevant and appropriate disciplinary standards and expectations in higher education generally. For instance, language departments generally rely on lecturers-in-discipline at a rate quite similar to that at peer institutions. During its discussions, the subcommittee learned that the PPC is preparing to conduct a careful review of Arts and Sciences policies for lecturers-in-discipline. So here, the subcommittee makes just one recommendation: *each course-offering unit should work collaboratively with the PPC, and with the Arts and Sciences administration, to support the PPC's upcoming study of the hiring, review, and status of Lecturers-in-Discipline.* We offer a separate discussion of the hiring and review of adjuncts in the next section.

C. THE HIRING AND REVIEW OF ADJUNCT INSTRUCTORS. The data reviewed by the subcommittee showed that course-offering units in Arts and Sciences do not make excessive use of adjuncts. The subcommittee also considered anecdotal evidence suggesting that units often rely on adjuncts who are particularly expert on topics that are critical for students in certain programs, and that the expertise of these adjuncts is sometimes a function of the fact that their primary employment responsibilities are not in the academy. But the subcommittee was not able to consider specific information about how departments review the credentials for the adjuncts they hire, the processes they follow in determining whether to re-hire adjuncts they have used or any training they may provide about some of the responsibilities that come with agreeing to teach in a university. Thus, the subcommittee makes the following recommendations: (1) *Arts and Sciences should consider conducting an informal survey of each unit's practices regarding the hiring and review of adjuncts, and (2) departments should be encouraged to develop a comprehensive handbook of campus services, academic structures and academic policies that can be supplied to adjuncts when they are hired.* It is particularly important to remind adjunct instructors that their teaching responsibilities may include writing letters of recommendation, or being available to provide information about academic standing for students whose academic needs (due to a leave, for instance) might extend beyond the official end date of the term.

D. STRENGTHENING COMMUNICATION AND COLLABORATION WITH THE REGISTRAR. This is one of the most important topics discussed by the subcommittee. It is critical that students have access to information about courses that is correct, concrete and available in a timely fashion. Of course, the process of supplying and publishing that information is necessarily complex. When departments hire new faculty members, for instance, they may not get detailed course information from their new colleague right away. Or, if staffing needs change because of unexpected leaves, departments may be challenged to adapt to student needs for reliable and timely information. Further, Arts and Sciences is working with complex information systems that may not always communicate with each other as efficiently and effectively as one would like. Given these considerations, the subcommittee makes two recommendations: (1) *course-offering units in Arts and Sciences should communicate in a timely way with the registrar and regularly review the directory of classes, and other information available online, for accuracy and (2) Arts and Sciences administrators should continue to encourage constructive discussion between course-offering units and the registrar.* It is critical that we increase mutual understanding of the challenges and constraints under which we all operate, and consider ways of creating opportunities for constructive innovation in our practices.

E. ASSESSING UNMET COURSE DEMAND. The subcommittee's discussion on this topic was relatively brief, but the subcommittee concluded that simply reviewing recent data about course wait lists may not provide a very helpful picture of the extent of unmet course demand. Informal conversations with representatives of General Studies and Columbia College suggested that reviewing summer school

enrollments and requests for Summer Session courses might be a better place to begin. Thus, the subcommittee makes two recommendations: *(1) discussion of unmet course demand should begin with detailed consultations with Directors of Undergraduate Studies and the Advising Deans, and (2) a careful study of waitlist practices and policies may be a useful supplement to information gained from discussions with the Directors of Undergraduate Studies and with Advising Deans.*

The Subcommittee on Innovative Practices in Teaching and Learning (chaired by David Helfand) had as its remit the critical examination of research in teaching and learning, a survey of current practices in light of the best research, and the formulation of recommendations and preparation of resources for Arts and Sciences faculty who wish to take advantage of them. The subcommittee has completed its work this year and is summarizing its findings in a report that will be circulated in the fall. However, a brief summary of the discussions of the subcommittee is included here.

For many years, the standard model for teaching in most university classrooms has focused on the transfer of information from teachers to students. Instructors draw on their expertise to select and organize the information they feel students should know, and then use the lecture format to convey that information to students. Instructors may go so far as to put a considerable fraction of this information on slides that can be posted on-line, making course attendance of questionable necessity for learning the relevant material. Students in this setting typically play a relatively passive role in the classroom, answering or asking occasional questions, but with little meaningful opportunity to engage actively with the material, let alone to learn to construct knowledge for themselves. There is accumulating evidence that this model is less effective than more active approaches. If we want students to learn and to retain as much as possible -- and if we want them through this learning process to develop critical thinking abilities, to cultivate the skills necessary for assessing arguments and evidence and to develop the instincts and confidence necessary for developing their own arguments -- then passive lectures need to be supplemented, and in some instances replaced, by more active and engaging classroom teaching models.

The objective of this subcommittee has been to consider strategies that might foster evolution toward more active, student-centered teaching in Arts and Sciences classrooms. The subcommittee began from the premise that any such evolution must occur voluntarily; the instructor is in charge of his or her classroom, and others should not impose requirements on how they endeavor to meet their teaching goals. The subcommittee also operated from the premise that no single formula for teaching can be applied uniformly across different instructors and subjects. The subcommittee did conclude that meaningful change in approaches to teaching can and will occur voluntarily -- and will in some cases be embraced enthusiastically -- if faculty members have opportunities to learn about new strategies they can adopt to improve students' learning experiences and learning outcomes. Thus, the principal goal was to understand how to make faculty members aware of such strategies and how to encourage and support them in embracing experimentation and change. Some strategies are remarkably simple. For example, such approaches include (a) pausing once or twice for two or three minutes in a lecture by posing a question and having the students either free write or discuss with their neighbor a response; (b) the exit poll -- saving the last minute of class for students to jot down either the central concept they took away or the most confusing point of the lecture (the former helps solidify the concept and the latter provides guidance for beginning the next lecture) and (c) projecting an image or writing a provocative sentence on the board before class starts to engage the students in the subject before the lecture begins. More radical departures from standard lectures should also be encouraged.

In arguing for change, it is important to recognize that, as this subcommittee has performed its work, the subcommittee discovered that there are a number of remarkable models of innovative and exciting teaching strategies that can be drawn upon that are already in place at Columbia. The subcommittee

also learned that most faculty members have little idea what other faculty members do in their classes, and thus these exciting models are often completely unknown to others, even to colleagues in the same department. There is currently no forum for faculty exchanges about teaching and little incentive or opportunity for faculty to share practices. The subcommittee also discovered that there are remarkable programs at Columbia's well-funded Center for Teaching and Learning (CTL), but that these programs have drawn modest interest from Arts and Sciences faculty members. It may be the case that the programs themselves need to evolve to better fit Arts and Sciences faculty interests, or it may be that there simply needs to be a better infrastructure for drawing faculty into existing programs.

The subcommittee intends to make a number of specific recommendations on the following matters:

- the need for a clear articulation by the University leadership of the importance of effective teaching
- the provision of resources so that departments and individual faculty members have the opportunity to develop new teaching strategies
- the need to better connect the Center for Teaching and Learning (CTL) with faculty members in Arts and Sciences, in part by involving more faculty members in the programs they present
- the need for a Faculty Advisory Committee for CTL with adequate Arts and Sciences representation
- the requirement that all new and renovated spaces take active learning strategies into account in their design

Regarding the last point, the subcommittee addressed the critical need for flexible classroom space designed for those faculty members who wish to adopt active learning practices. EPPC sent a letter to the EVP of Arts and Sciences that illustrates how far we are behind our peers, and asked the EVP of Arts and Sciences to be mindful of these needs in the short-term as well as in the medium-term, as in the pending acquisition of Uris and in other renovations to create classroom space.

The Subcommittee on Class Size and Education (chaired by Greg Wawro) has been considering the impact of class size on students' educational experiences, access to classes undergraduates need to complete their programs, assignment of teaching assistants and possible lower limits on class sizes, as well as best practices for size of language classes. The mission of the subcommittee was to examine evidence and practices regarding class size and recommend a set of guidelines for Columbia faculty within Arts and Sciences. The subcommittee has completed its work this year and will be issuing a final report for discussion in the fall. A brief summary of their findings is included here.

This year, the subcommittee made significant progress on its two-pronged approach to enhance our understanding of a range of issues related to class size. The first prong involves a quantitative analysis of an incredibly rich data set spanning an eleven-year period, covering academic years 2004 through 2014. This analysis provides the longitudinal perspective that is essential for a comprehensive understanding of enrollments. The data set includes approximately 40,000 course-level observations with detailed information about enrollments, 65,000 observations on program declarations by over 15,000 undergraduate students, and approximately 1.7 million observations on student-level course choices at both the graduate and undergraduate levels. The write-up of the analysis of this data is in its final stages. The second-prong, informed by the first, involves discussions with representatives with the 27 departments that make up Arts and Sciences. These discussions, conducted during the spring semester, were in part motivated by results obtained from and questions raised by the quantitative analysis. Separate meetings were held with each division, with the Humanities further divided into departments that engage in language instruction and those that do not. The meetings were well attended, allowed for detailed and frank discussions and provided tremendous insight into departments' perspectives on issues related to class size.

The results of the quantitative analysis and discussions with departments led the subcommittee to produce a set of six recommendations that it believes will improve student, staff, and faculty experiences at Columbia. The recommendations involve policies for setting enrollment caps, broadening the pool of available teaching assistants to meet demand dictated by enrollments, classroom infrastructure, stricter limits on the number of courses that students can enroll in (integrated with electronic waitlist activity) and improving registration procedures to avoid suppression of enrollments in language courses. The subcommittee's full report will be finalized over the summer and will be ready for discussion in the EPPC—and with Arts and Sciences faculty more generally—as soon as the fall semester begins.

The Subcommittee on Course Evaluations (chaired by Josh Whitford) continued to consider policies related to student course evaluations. The subcommittee undertook three principal tasks in the 2016-2017 academic year. First, as part of its mandate to implement a two-year pilot of the publication of the answers to select questions from student course evaluations to Vergil, the committee established clear policy and guidelines on the withholding of particular evaluations on grounds of bias. Second, and relatedly, the committee is preparing a report on that implementation; that report will recommend that publication of evaluations to Vergil continue with no changes to the current piloted policy, which allows faculty members to opt out of the publication on a year-by-year basis. Third, the subcommittee proposed a change to the timeline for course evaluations that will allow students to submit those evaluations any time between the last week of classes and, most likely, the grading deadline (they will, however, still be unable to see the grade before evaluating). This proposal was passed by EPPC, department chairs, and the full faculty, and will be implemented in the 2017-18 academic year.

The Task Force on Global Education in the Arts and Sciences (chaired by Rosalind Morris) completed its work in the spring of 2016. The final report of the task force was made available to the Arts and Sciences faculty, and discussed at faculty meetings and with EPPC and the Executive Committee of Arts and Sciences. The report made recommendations related to the three main areas of educational activity of the Arts and Sciences: undergraduate education, graduate education, and teaching abroad. One of the most significant recommendations of the report was to establish a standing committee to advise the Executive Committee (EC) on matters related to global education. The EC has approved the formation of this new standing committee as a subcommittee of EPPC, and I am pleased to report that Patricia Grieve, who served on the Task Force, has agreed to serve as the inaugural chair of this new subcommittee.

Related to this topic of global education, EPPC has met with the directors of the Global Centers, and established a plan to hold periodic informational sessions when the directors of the global centers are all on campus together, to assist faculty in Arts and Sciences in incorporating the global centers into their teaching and research plans. We look forward to sharing more information as this develops.

Proposal on Procedures In Arts And Sciences For Documenting Teaching Excellence

EPPC subcommittee on Teaching Evaluations in Promotion and Hiring Decisions

- Manan Ahmed (Assistant Professor, History)
- Sarah Cole (Chair and Professor, English)
- David Helfand (Professor, Astronomy)
- Ellie Hisama (Professor, Music)
- Suzanna Klaf (Interim Director of Faculty Teaching Initiatives and Programs, Center for Teaching and Learning)
- Dan O’Flaherty (Chair, PPC; Professor, Economics)
- Rose Razaghian (Associate Vice President for Planning, Analysis and Curricular Coordination, Arts and Sciences)
- Brent Stockwell (Chair of subcommittee and Chair of EPPC; Professor, Chemistry and Biological Sciences)
- Miguel Urquiola (Professor, Economics and International and Public Affairs)

Rationale: This committee was formed to examine how teaching factors into hiring and promotion in Arts and Sciences. While the committee concluded there is no need to add new teaching requirements to the standards for tenure and promotion, it found there is a need to articulate current standards, to clear up confusion among departments and faculty members about the place teaching holds among the criteria for hiring and promotion, to offer recommendations on how to improve the visibility and quality of teaching and to articulate how information about teaching is communicated to hiring and promotion committees. The committee recommends that excellence in teaching be emphasized at all ranks of the ladder faculty. The goal of these recommendations is to recognize and highlight the excellent teaching found within Arts and Sciences, not to alter the current balance among teaching, research and service that forms the basis for hiring and promotion decisions. Thus, the EPPC subcommittee on Teaching Evaluations in Promotion and Hiring Decisions recommends the following:

- **Recommendation 1. Articulate each department’s vision of exemplary teaching**
Each department within Arts and Sciences is asked to prepare a short statement on what constitutes exemplary teaching within the disciplines found in the department; an example is attached as Appendix I. Each department’s statement will be provided to all current and new instructors in the department, and will serve as the basis for establishing expectations for faculty at all ranks. These statements will be collected by EPPC and distributed to all departments. The statements will also be shared with new chairs during chair orientations, and will be examined and amended if necessary during each ARC review.
- **Recommendation 2. Reconsider departmental approaches to documenting teaching excellence**
Each department within Arts and Sciences should review and, if appropriate, revise their current practices for the articulation of faculty teaching excellence on a regular basis. For faculty recruited after January 1, 2019, departments may choose to adopt the new template suggested in Appendix II for preparing statements regarding teaching excellence for all new departmental hires and for all promotion cases. Departments also have the option of continuing to use their existing procedures and templates. The goal of such a change in procedures is to provide a more complete picture of teaching quality than is available from student course evaluations alone; such a template may also serve as a framework to further encourage the development of teaching skills among faculty.
- **Recommendation 3. Communicate consistently regarding Arts and Sciences’ teaching values**
New instructors in Arts and Sciences should learn in orientation about the role of teaching excellence in the life of a scholar-teacher at Columbia. New faculty member orientation should

include explicit statements from the Provost and the Arts and Sciences Executive Committee about the value of teaching.

- **Recommendation 4. Recognize and incentivize professional development efforts**

All faculty members should be supported if they choose to engage in professional development that is evidence-based, improves teaching practices and enhances student learning. Such formative offerings should be selected, where possible, based on their causal impact, so that departments and faculty members can make informed choices on the best training for their individual needs and goals. Faculty members should be offered -- by the Provost and/or Arts and Sciences -- monetary supplements that may be received either as additional compensation or as a research supplement for completing teaching training programs. Professional development should be recognized as valuable for even the best and most experienced teachers.

- **Recommendation 5. Provide uniform guidance on the role of teaching in hiring and promotion to department chairs**

Department chairs should be asked to familiarize themselves with the departmental statements on teaching in recommendation 1, and are responsible for helping new and current faculty members to understand the department's teaching expectations. In addition, department chairs should ensure that a suitable context is provided in promotion cases to explain why a faculty member is teaching specific courses, how their teaching assignments are expected to change over time, and how their evaluations, enrollments and teaching quality compare to other faculty members and courses. The chair should also interact with the administration of Arts and Sciences to ensure that the teaching evaluation information provided to the Promotion and Tenure Committee is suitably prepared. The new chair orientation should include discussion of the importance of teaching and a reminder that chairs are responsible for conveying the department's teaching standards to junior faculty. Chairs should be reminded by Arts and Sciences to consult the tenure case statement guideline section on teaching as they prepare tenure case statements for both internal and external candidates.

Appendix I. Example of a departmental statement on exemplary teaching

The mission of department X is to teach students how to describe, analyze and explain phenomena in terms of underlying molecular mechanisms. As part of this overarching goal, we seek to train students in fields of active research, and prepare them for a careers in basic research, as well as to train students with other career interests in critical thinking about natural processes, including topics of general interest. Independent research is a critical step in development toward the program goal of being able to describe, analyze and explain phenomena using chemical, physical and mathematical mechanisms. The intellectual arc of our departmental educational program progresses from foundational material to reading and analysis of advanced primary literature. Intermediate students are introduced to the scientific literature, while advanced students are expected to perform independent research and to integrate their data with both the primary literature and the larger scientific enterprise. Our program goals are specifically to have students learn to:

- Describe, analyze and discover mechanisms underlying natural processes through experimentation, modeling and scholarship
- Understand and apply common experimental design principles and approaches to develop a mechanistic understanding of biological processes
- Use appropriate analytical methods to describe and interpret empirical data, including both quantitative analyses and visualization of data
- Gain insight into the chemical, physical and mathematical bases of the natural world.
- Be able to critically evaluate, defend and critique experimental data
- Behave ethically, demonstrating a respect for animal and human subjects, privacy of personal information from human subjects and integrity of research data
- Demonstrate an ability to collaborate effectively with diverse others
- Demonstrate information literacy through the ability to obtain, assimilate and explain relevant primary sources on topics of interest; attain proficiency in the use of large data bases and the algorithms for exploring complex information systems

We seek to teach courses in which students gain a new perspective that forever alters how they interact with the world, and that cements a love of lifelong learning about the natural world. We work to realize these program goals through the following methods:

- Active learning, in which students are provided an opportunity in class to actively interact with course material through class discussions, audience response systems, discussions and problem-solving sessions with classmates. Active learning has been documented in numerous studies to enhance both student engagement and student learning.
- Formative feedback and rubrics, in which students are provided examples of the types of assignments that will ultimately lead to a summative assessment of learning in the course, and given feedback on how their performance aligns with a rubric describing various performance levels in the course. Formative feedback has been demonstrated to reduce student anxiety and stress, and to increase learning.
- Inclusive teaching, in which students from diverse background, cultures and learning styles are considered when pedagogical techniques and examples for discussion are selected. Inclusive teaching increases the retention of diverse groups in educational programs. For example, when

discussing individual scientists, we encourage the use of examples from diverse cultures, genders and ethnic groups, if appropriate to the pedagogical goals of the class. In addition, we recognize that some students readily contribute to discussions in class, but others may have cultural or personal barriers that inhibit expression, so we encourage providing a variety of modalities by which students can demonstrate their mastery of course material.

- Reflective teaching, in which instructors start from the learning outcomes they wish to achieve, and then design class activities, assignments and assessments in order to achieve these outcomes. Faculty members then reflect several times throughout the semester on the aspects of the course that have met expectations, exceeded expectations, or not met expectations, the possible causes of these outcomes, and how the course might be adjusted to improve outcomes. Soliciting feedback from students throughout the course is a tool that assists reflective teaching, and allows students to provide formative feedback to the instructor prior to the summative course evaluation.

We encourage each new departmental instructor to discuss this statement with the chair of the department.

Appendix II. Sample template for documenting teaching effectiveness of instructors for hiring and promotion

Departments may choose to continue using their existing procedures, or to adopt this template, or a modified version of this template, as part of their tenure and promotion procedures:

- **Teaching statement.** Candidates will be asked for a statement of their teaching philosophies that identifies the pedagogical approaches favored by the candidates, how these have evolved over time, and how these approaches support student learning. It should also include strategies used for promoting inclusive teaching to address the diverse types of learners encountered in the classroom, and a discussion of common problems encountered in teaching students along with the approaches used to solve these problems. The statement should place the teaching of the candidate in context, explaining how the enrollments, evaluations and courses taught compare to the teaching performance of similar faculty members.
- **Course materials.** Syllabi should be provided for courses taught, along with a statement regarding the goals of the course, the structure of the course and the material examined. Candidates may choose to share evidence collected that the course goals have been realized. In addition, examples of assignments and student responses to assignments for at least three assignments should be included. Candidates may further provide a statement explaining the rationale for providing the assignments to the students, in terms of what course goal was being examined and how the responses to assignments constituted or did not constitute evidence that the course goal had been realized for students. These assignments and response should be placed in the context of other courses at Columbia and in the field of the candidate.
- **Professional development.** Documentation of any professional development as a teacher and/or mentor, and any awards received should be noted. This might include completion of teacher or mentor training programs, publications and conference presentations or attendance related to teaching or mentoring, along with a statement about how these professional activities foster the teaching philosophy and professional development goals of the candidate and the department. Any course development, innovation and/or leadership activities related to teaching should be provided, along with a statement describing why these activities were undertaken, how they met or did not meet expectations and what impact they are expected to have on future activities of the candidate.
- **Mentoring activities.** The candidate should provide a summary of mentoring activities, including a complete list of doctoral, postdoctoral and undergraduate students mentored, along with a statement of the mentoring approaches used.
- **Course evaluations.** The current practice of providing numerical summaries of course evaluations should continue, but these will be prepared in consultation with the department chair. In addition, the numerical scores of the candidate and enrollments will be compared to a reference set of scores and enrollments for similar faculty members and courses in the department; these comparison choices will be made in consultation with the chair, the candidate and the administration of Arts and Sciences. The context for the courses taught, the evaluation scores and the enrollments will be discussed by both the department chair and, if desired, the candidate in their statements.

The above information will be obtained for internal promotions to associate professor with and without tenure, and to full professor. For external senior faculty hires, as much of this information will be obtained as possible, with the understanding that all of this information may not be available.

This template, if adopted, should be applied to all new faculty members hired after January 1st, 2019 and to all further promotions of faculty tenured after January 1, 2019. Departments are also encouraged to create a plan for formative development of their faculty and to identify criteria for evaluating teaching excellence; this will allow faculty members to identify areas for improvement toward meeting the departmental teaching standards, and to understand what constitutes excellence in teaching in the view of the department. Formative feedback should be separated as much as possible from summative judgments of teaching effectiveness. Any evaluations of faculty teaching should be based on validated procedures reported in the literature, and those performing evaluations should be trained in the proper use of such evaluation methods. To supplement department efforts, note that the Columbia Center for Teaching and Learning (CTL) is one venue that provides formative professional development through a range of programs (e.g., workshops, institutes, and seminars) and services (consultations and formative teaching observation services). The CTL is not involved in hiring, promotion and tenure decisions.

Appendix III. Summary of current review processes related to teaching

A. Current review process for language lecturers

For reference, the current review process for language lecturers is as follows.

In all cases, beginning with the developmental review in the second year, the Standing Committee on Language Lecturers will require evidence of a full and complete departmental review of the candidate's work. Reviews in the second, fifth, and eighth years should include evaluation by a three-person review committee. The department chair will appoint a three-person committee to conduct a review and make a recommendation to the department for renewal or non-renewal. It is important that at least one member of the review committee be trained in language pedagogy and at least one member of the review committee be external to the department, but not necessarily external to the university. The department will deliberate on the committee's recommendation. The outcome of those deliberations will be communicated to the Executive Vice President for Arts and Sciences in a letter of transmittal.

The review process should entail:

- 1) Examination of the candidate's dossier, which includes an updated curriculum vitae, a statement of teaching philosophy, a statement of professional work in progress and samples of course materials such as syllabi, handouts and supplements.
- 2) Evaluation by each of the three reviewers of classroom performance composed after observing at least two classes, and a review of student evaluations for all classes taught by the candidate since the last review (if applicable). The evaluations composed by the three reviewers should be attached to the letter of transmittal to the Executive Vice President for Arts and Sciences. Copies of all student evaluations should be submitted along with the summary data page for each set of student evaluations.

The following will be assessed through a review of the statement of teaching philosophy, classroom observation, and the student evaluations:

- 1) Strategies used to promote target language communication
- 2) Strategies used to meet the needs of all learners
- 3) Reflection of pedagogical goals as reflected in the work assigned to students
- 4) Strategies for engaging students in cultural activities within and outside the classroom
- 5) Consonance between pedagogical practices and the candidate's statement of teaching philosophy

The following will be assessed through the examination of the curriculum vitae and the statement of professional work in progress:

- 1) Evidence of professional growth in the field of language pedagogy
- 2) Active involvement in the profession either at Columbia or nationally
- 3) Professional leadership experience and performance

B. Current review process for lecturers in discipline

In all cases, beginning with the developmental review in the second year, the Promotion and Tenure Committee will require evidence of a full and complete departmental review of the candidate's work.

Reviews must include evaluation by a three-person review committee, appointed by the department chair to conduct a review and make a recommendation to the department for renewal or non-renewal. It is important that at least one member of the review committee be an expert in the lecturer's area of research, creative or policymaking activity and at least one member of the review committee be external to the department, but not necessarily external to the University. The department will deliberate on the committee's recommendation. The outcome of those deliberations will be communicated to the Executive Vice President for Arts and Sciences in a letter of transmittal.

The review process should entail:

1. examination of the candidate's dossier, which includes an updated curriculum vitae, a statement of teaching philosophy, a statement of professional work in progress and samples of course materials such as syllabi, handouts and supplements;
2. individual evaluations by each of the three reviewers of classroom performance composed after observing at least two classes, and a review of student evaluations for all classes taught by the candidate since the last review (if applicable). The evaluations composed by the three reviewers should be attached to the letter of transmittal to the standing committee. Copies of all student evaluations should be submitted to the standing committee along with the summary data page for each set of student evaluations.

The following will be assessed through a review of the statement of teaching philosophy, classroom observation, and the student evaluations: 1) strategies used to promote student involvement/attentiveness; 2) strategies used to meet the needs of all learners; 3) reflection of pedagogical goals as reflected in the work assigned to students; 4) strategies for engaging students in activities within and outside the classroom; and 5) consonance between pedagogical practices and the candidate's statement of teaching philosophy.

The following will be assessed through the examination of the curriculum vitae and the statement of professional work in progress: 1) evidence of professional growth in the field of the discipline; 2) active involvement in the field or profession either at Columbia or nationally; and 3) professional leadership experience and performance.

Report to the Promotion and Tenure Committee

In instances of a positive vote by the department, the chair of the department will prepare a letter of transmittal to be sent to the Executive Vice President for Arts and Sciences. The letter will record the result of the departmental vote and summarize the basis for the department's positive recommendation. It will include a discussion of the candidate's teaching load and course enrollments and be accompanied by an analysis of teaching performance. The statement will analyze the available data and reports of teaching observations as they reflect both the instructor's strengths and areas in need of attention. The letter should also speak to the department's recommendations at the last review as well as to the candidate's responses to them. The letter should be accompanied by the candidate's full dossier: curriculum vitae, the statement of teaching philosophy, the statement of professional work in progress, samples of course materials such as syllabi, handouts and supplements to the text and written reports of classroom observations and post-visitation discussions from each of the faculty members who observed the candidate's class and examined the student evaluations. Please see Appendix B below for instructions on submitting the dossier in PDF files.

C. Excerpts of current tenure review guidelines

For reference, the current tenure review guidelines, as described in the Provost's document "PRINCIPLES AND CUSTOMS GOVERNING UNIVERSITY-WIDE TENURE REVIEWS" include the following:

- Even more critical are the qualifications of the individual proposed to fill the position. In every instance, the nominee must be an outstanding scholar, a person who has demonstrated the capacity for imaginative, original work and who shows promise of continuing to make significant contributions to research. Excellence as a teacher is also necessary, and service to the University and discipline is important.
- The department or school supports its assessment of the candidate's expected contribution to its educational programming with course syllabi and other forms of written evidence appropriate to its field. In addition, it supplements its assessment of the nominee's teaching with evidence of his or her abilities as a teacher, such as a statistical summary of course evaluations either at Columbia or from the candidate's previous institution, the results of classroom observations, a representative sample of student course evaluations, information on the candidate's former students and teaching awards.
- Similarly, in evaluating a candidate's teaching record, TRAC considers:
 - The quality of classroom teaching, as measured by student evaluations;
 - Mentoring of doctoral students and post-docs, as shown by their number and their careers after completing their studies with the candidate;
 - Awards for teaching;
 - Contributions to the development of curricular programming at the institution at which the candidate serves; and
 - Other indicators of a candidate's educational commitment and excellence such as work with pre-doctoral students and participation in disciplinary initiatives in curricular development.
- Teaching Qualifications
 - As part of the case statement, the department or school discusses the nominee's qualities as a teacher. It explains what the teaching expectations are in the department and/or school and it includes information on courses taught, students (both graduate and undergraduate) and postdocs advised, and, where appropriate, participation in curricular development. It also assesses the nominee's effectiveness in the classroom and as a mentor.
 - Evidence of the nominee's educational contributions, such as course syllabi, may be included in support of this section of the statement.
 - The discussion of teaching effectiveness should be substantiated by documentation, such as the results of surveys of student opinion, letters from current and former students or reports on classroom observations. If the nominating department or school uses student evaluations for that purpose, it should include a statistical summary of the results for two or three of the key questions asked (such as the overall quality of the candidate's teaching or the quality of the course) using the table appended to the statement as Exhibit F. The department or school may also include the statistical results for other questions but should not include individual student forms. Those forms may be included, instead, as an appendix to this section.
 - The discussion of the candidate's role as a mentor should be accompanied by a list of the students and postdocs advised and their current positions when that information is known.

Sample Summary of Teaching Evaluations – Arts and Sciences Faculty

Description of the scale used to evaluate the course and instructor.

		<i>Excellent: 5</i>	<i>Very Good: 4</i>	<i>Good:3</i>	<i>Fair: 2</i>	<i>Poor: 1</i>
Course and Questions	Semester Taught	Enrollments	Responses Received	Average Rating	Standard Deviatio	
Course 1	COURSE - TITLE					
	Spring 2015					
	<u>Section 001</u>	80	43			
Question 1	Overall effectiveness of instructor			4.44	0.80	
Question 2	Overall quality of course			4.23	0.87	
	<u>Section 002</u>	70	38			
Question 1	Overall effectiveness of instructor			4.19	1.05	
Question 2	Overall quality of course			3.86	1.06	
	Spring 2014	85	37			
Question 1	Overall effectiveness of instructor			4.32	0.78	
Question 2	Overall quality of course			4.14	0.82	

C. Current dossier requirements for Columbia Presidential Teaching Awards

The focus of the dossier should be on documenting the impact the candidate has had on the education, intellectual development and future of Columbia students. As the competition is particularly keen, we suggest that the dossier include as many of the following as are applicable:

- A statement of no more than 750 words summarizing the qualities of the candidate as a teacher and advisor. If she has made innovative contributions to our educational programs by, for example, developing imaginative new courses or creatively using multimedia technologies to enhance student learning, or if she has played an important role in directing one of our educational programs, we would also encourage you to describe those contributions in your statement.
- Information on educational excellence beyond the classroom, such as community-oriented teaching, innovative programs affecting departmental instruction or the application of new media technologies for educational purposes.
- Information on dissertations and post-docs supervised, and the current positions of former students.
- Up to three letters of support from current and former students: undergraduate, graduate, or both.
- Up to two letters of support from colleagues who have had the opportunity to observe her teaching and advising, inside the classroom or out.
- A summary of student teaching evaluations over the past 5 years, including class sizes and average overall rating scores, as well as any relevant *textual excerpts for the past five years*, if available. Please follow the format below to the extent possible in summarizing teaching evaluations:

Term/Year	Course #	Course Name	Enrollment	Average Overall Course Rating (describe scale)	Average Score for Quality of Instruction (describe scale)
Spring 2010					
Summer 2010					
Fall 2010					
...					
Summer 2014					
Fall 2014					
TEXT – Representative qualitative comments sampled from the past 5 years					

- A curriculum vitae.

Appendix IV. Additional resources related to effective methods for teaching recommended by colleagues

Buller, J.L. (2012). *Best Practices in Faculty Evaluation: A Practical Guide for Academic Leaders*. San Francisco: Jossey-Bass. Available as an ebook through CLIO:

<https://ebookcentral.proquest.com/lib/columbia/detail.action?docID=875813>

or for purchase: <https://www.amazon.com/Best-Practices-Faculty-Evaluation-Practical/dp/111811843X>

Danielson C. *The framework for teaching. Evaluation Instrument*. Charlotte Danielson, 2014. ISBN: 978-0615597829. See www.danielsongroup.org.

Fink LD. *Creating significant learning experiences. An integrated approach to designing college courses*. San Francisco, CA, USA: John Wiley and Sons, 2013. Available as an ebook through CLIO:

[http://web.b.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail/detail?sid=3bf8e289-55b6-41c5-ad41-](http://web.b.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail/detail?sid=3bf8e289-55b6-41c5-ad41-5becb351b4d6%40sessionmgr103andvid=0andhid=125andbdata=JnNpdGU9ZWZWhvc3QtbGl2ZSszY29wZT1zaXRI#AN=86025anddb=nlebk)

[5becb351b4d6%40sessionmgr103andvid=0andhid=125andbdata=JnNpdGU9ZWZWhvc3QtbGl2ZSszY29wZT1zaXRI#AN=86025anddb=nlebk](http://web.b.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail/detail?sid=3bf8e289-55b6-41c5-ad41-5becb351b4d6%40sessionmgr103andvid=0andhid=125andbdata=JnNpdGU9ZWZWhvc3QtbGl2ZSszY29wZT1zaXRI#AN=86025anddb=nlebk) Or for purchase: <https://www.amazon.com/Creating-Significant-Learning-Experiences-Integrated/dp/1118124251>

Graham R. (2016) *Does teaching advance your academic career? Interim report on the development of a template for evaluating teaching achievement*. Royal Academy of Engineering. ISBN: 978-1-909327-24-5. Available to download from: www.raeng.org.uk/evaluatingteaching. For an online version of the report and evaluation toolkit: www.evaluatingteaching.com.

Handelsman J, Miller S, Pfund C. *Scientific Teaching*. New York, NY, USA: Roberts and Company, 2007. <https://www.amazon.com/Scientific-Teaching-Jo-Handelsman/dp/1429201886>

Seldin, P. (2006). *Evaluating Faculty Performance: A Practical Guide to Assessing Teaching, Research, and Service*. San Francisco: Jossey-Bass. <https://www.amazon.com/Evaluating-Faculty-Performance-Practical-Assessing/dp/1933371048>

Wiggins G and McTighe J. *Understanding by design, 2nd expanded edition*. Alexandria, VA USA: Association for Supervision and Curriculum Development, 2005. <http://www.ascd.org>

Educational Policy and Planning Committee (EPPC)

Committee Chair:

Stockwell, Brent, Professor of Biological Sciences and Chemistry bstockwell@columbia.edu

Committee Members (in alphabetical order):

Ahmed, Manan, Assistant Professor of History	ma3179@columbia.edu
Alonso, Carlos, Vice President for Graduate Education, Dean of GSAS, Professor of Latin American and Iberian Cultures	ca2201@columbia.edu
Awn, Peter, Dean of General Studies, Professor of Religion	pja3@columbia.edu
Bernofsky, Susan, Associate Professor of Writing, School of the Arts	sb3270@columbia.edu
Boughner, Zachary, CC Student Representative	ztb2003@columbia.edu
Brown, Bailey, GSAS Student Representative	bab2194@columbia.edu
Crawford, Julie, Chair Committee on the Core, Professor of English and Comparative Literature	jc830@columbia.edu
Grieve, Patricia, Chair Committee on Global Core, Professor of Latin American and Iberian Cultures	peg1@columbia.edu
Griffin, Kevin, Chair Committee on Science Instruction, Professor of Earth and Environmental Sciences and Ecology, Evolution and Environmental Biology	griff@ldeo.columbia.edu
Helfand, David, PPC Representative, Professor of Astronomy, EPPC Subcommittee Chair, Innovative Practices in Teaching and Learning	djh@astro.columbia.edu
Herman, Allegra, GS Student Representative	ah3128@columbia.edu
Madigan, David, Executive Vice President for Arts and Sciences, Dean of the Faculty, Professor of Statistics	david.madigan@columbia.edu
Moody-Adams, Michele, Professor of Philosophy, EPPC Subcommittee Chair, Coordination of Instructional Staffing and Scheduling	moody-adams@columbia.edu
Morris, Rosalind, Professor of Anthropology	rcm24@columbia.edu
Morrison, Barclay, Vice Dean of Undergraduate Programs, SEAS, Associate Professor of Biomedical Engineering	bm2119@columbia.edu
O'Halloran, Sharyn, Senior Vice Dean and Chief Academic Officer, School of Professional Studies, Professor of International Affairs and Political Science	so33@columbia.edu
Valentini, James, Vice President for Undergraduate Education, Dean of Columbia College, Professor of Chemistry	jjv1@columbia.edu
Wawro, Gregory, PPC Representative, Professor of Political Science, EPPC Subcommittee Chair, Class Size and Education	gjw10@columbia.edu
Whitford, Joshua, PPC Representative, Associate Professor of Sociology, EPPC Subcommittee Chair, Course Evaluations	jw2212@columbia.edu

PPC Attendance

Povinelli, Elizabeth, PPC Member, Department Chair, Professor of Anthropology ep2122@columbia.edu

Ex Officio

Hollibaugh, Lisa, Dean of Academic Planning and Administration, Columbia College lh5@columbia.edu

Razaghian, Rose, Associate Vice President for Planning, Analysis and Curricular Coordination, Arts and Sciences rr222@columbia.edu

Rosner, Victoria, Dean of Academic Affairs, School of General Studies vpr4@columbia.edu

Solomon, Andrea, Vice Dean and Dean of Academic Affairs, GSAS asolomon@columbia.edu

Subcommittee on Teaching Evaluations in Promotion and Hiring Decisions

Subcommittee Chair

Stockwell, Brent, Professor, Chemistry and Biological Sciences (bstockwell@columbia.edu)

Subcommittee Members

Ahmed, Manan, Assistant Professor, History (ma3179@columbia.edu)

Cole, Sarah, Department Chair and Professor, English and Comparative Literature (sc891@columbia.edu)

Helfand, David, Professor, Astronomy (djh@astro.columbia.edu)

Hisama, Ellie, Professor, Music (eh2252@columbia.edu)

Klaf, Suzanna, Associate Director, Center for Teaching and Learning (sk4189@columbia.edu)

O'Flaherty, Brendan, PPC Chair, Professor, Economics (bo2@columbia.edu)

Razaghian, Rose, Associate Vice President for Planning, Analysis and Curricular Coordination, Arts and Sciences (rr222@columbia.edu)

Urquiola, Miguel, Professor, Economics and International and Public Affairs (miguel.urquiola@columbia.edu)

Subcommittee on Innovative Practices in Teaching and Learning

Subcommittee Chair

Helfand, David, Professor, Astronomy (djh@astro.columbia.edu)

Subcommittee Members

Garton, Bradford, Professor, Music (garton@columbia.edu)

Heicklen, Alice, Senior Lecturer in Discipline, Biological Sciences (ah2289@columbia.edu)

Higgins, Edward Tory, Professor, Psychology and Business (tory@psych.columbia.edu)

Huber, John, Professor, Political Science (jdh39@columbia.edu)

Klaf, Suzanna, Associate Director, Center for Teaching and Learning (sk4189@columbia.edu)

Lax, Jeffrey, Associate Professor, Political Science (jrl2124@columbia.edu)

Mercer, Christia, Professor, Philosophy (cm50@columbia.edu)

Subcommittee on Class Size and Education

Subcommittee Chair

Wawro, Greg, Professor, Political Science (gjw10@columbia.edu)

Subcommittee Members

Elmes, Susan, Senior Lecturer in Discipline, Economics (se5@columbia.edu)

Gerbino, Giuseppe, Associate Professor, Music (gg2024@columbia.edu)

Griffin, Kevin, Chair Committee on Science Instruction, Professor of Earth and Environmental Sciences and Ecology, Evolution and Environmental Biology (griff@ldeo.columbia.edu)

Razaghian, Rose, Associate Vice President for Planning, Analysis, and Curricular Coordination, Arts and Sciences (rr222@columbia.edu)

Solomon, Andrea, Vice Dean and Dean of Academic Affairs, GSAS (asolomon@columbia.edu)

Spinelli, Barbara, Senior Lecturer in Discipline, Italian (bs2165@columbia.edu)

Subcommittee on Course Evaluations

Subcommittee Chair

Whitford, Joshua, Associate Professor, Sociology (jw2212@columbia.edu)

Subcommittee Members

Ahmed, Manan, Assistant Professor, History (ma3179@columbia.edu)

Cords, Marina, Professor, Ecology, Evolution and Environmental Biology (mc51@columbia.edu)

Crawford, Julie, Professor, English and Comparative Literature (jc830@columbia.edu)

Kane, Barry, Associate Vice President and University Registrar (bk2430@columbia.edu)

Morris, Rosalind, Professor, Anthropology (rcm24@columbia.edu)

Palm, Fred, Chief Administrative Academic Affairs Officer, Arts and Sciences
(fred.palm@columbia.edu)

Razaghian, Rose, Associate Vice President for Planning, Analysis, and Curricular Coordination,
Arts and Sciences (rr222@columbia.edu)

Tong, Jessie, Assistant Director, Academic Affairs, Arts and Sciences (jt2622@columbia.edu)

Subcommittee on Coordination of Instructional Staffing and Scheduling

Subcommittee Chair

Moody-Adams, Michele, Professor, Philosophy (moody-adams@columbia.edu)

Subcommittee Members (in alphabetical order)

Elmes, Susan, Senior Lecturer in Discipline, Economics (se5@columbia.edu)

Leake, Elizabeth, Professor, Italian (el2598@columbia.edu)

Quartaro, Stacey, Director of Academic Administration and Finance, Philosophy
(sg2170@columbia.edu)

Razaghian, Rose, Associate Vice President for Planning, Analysis, and Curricular Coordination,
Arts and Sciences (rr222@columbia.edu)

Zheng, Tian, Associate Professor, Statistics (tian.zheng@columbia.edu)