

University Senate

Proposed: October 3, 2025

Adopted: October 3, 2025

72-1-0: In favor-opposed-abstained

RESOLUTION TO ENDORSE THE 2025 REAPPORTIONMENT REPORT

BE IT RESOLVED that the University Senate endorse the 2025 Reapportionment Report.

Proponent:

Elections Commission

COLUMBIA UNIVERSITY SENATE
ELECTIONS COMMISSION

September 16, 2025

Re: University Senate Reapportionment

Jeanine D'Armiento
Chair, Executive Committee
Columbia University Senate
535 West 116th Street
New York, NY 10027

Dear Senator D'Armiento:

On behalf of the University Senate Elections Commission, I am pleased to submit the enclosed report and recommendations for reapportionment of seats in the University Senate. Based upon its analysis of population shifts within the University, the Commission recommends no adjustments to the current apportionment. The relative sizes of the various constituencies have not changed enough since 2020 to warrant changes.

Section 21 of the Statutes requires that 85 of the Senate's 111 seats be reapportioned every five years among the faculties of the Columbia Corporation and its affiliated institutions. Taking into consideration the establishment of the School of Climate, the seats subject to reapportionment are 43 for tenured officers of instruction, 17 for non-tenured officers of instruction, and 25 for students. The last reapportionment occurred in 2020 and was effective for the Senate's fall 2020 elections. The present allocation will continue until the next scheduled reapportionment in 2030.

The enclosed report is intended to satisfy the Elections Code provision that the Commission "advise the Senate" on the reapportionment process. While preparing this report, the Commission consulted with the Provost's Office of Planning and Institutional Research (OPIR) and Office of Academic Appointments (OAA) to obtain the most accurate and up-to-date population figures for the applicable Senate constituencies. The Commission also received input during the process of drafting this report from the Senate Structure and Operations Committee, and we are very grateful to that committee's members for their time and participation. With assistance of the Senate staff, the Commission analyzed the population data provided by OPIR and OAA alongside relevant provisions of the Statutes and Elections Code to determine the

COLUMBIA UNIVERSITY SENATE
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appropriate apportionment of Senate seats. These determinations form the basis of the Commission's recommendation that no changes be made to the current allocation of seats.

The Senate Structure and Operations Committee endorsed this report and its recommendation on September 15, 2025.

In 2020, the Elections Commission recommended several changes to the Statutes in order to resolve ambiguities and remove antiquated sections that now led to unworkable conclusions. The Senate acted on those recommendations. The Senate also approved an expansion of its membership to accommodate the addition of the Climate School in 2021. It is unclear at this writing whether those amendments have been incorporated in the Statutes. In this document we will proceed as if they have been. We will point out the serious difficulties that would arise if they were not, however, and we will also show that in most cases, the interpretations we use can be supported even if the amended Statutes are not in place.

The Commission expresses its tremendous gratitude to Miranda Rehaut, chair of the Elections Commission in 2019-2020; Samuel Roth, the chair of the Elections Commission in 2014–15, and Benjamin Brickner, the chair of the Elections Commission in 2009–10, for providing the Commission with the wonderful and thorough template for reapportionment that the Commission has used to conduct this quinquennial reapportionment. In addition, the Commission is very grateful to Geraldine McAllister, Cynthia Langin, and Zeid Sitnica for their time and assistance in the reapportionment process.

I commend this report to your attention and respectfully request that it be forwarded to whomever its contents may concern.

For the Elections Commission,

Batya Tropper, Chair

cc: Claire Shipman, Acting President, Columbia University

Daniel Savin and Brendan O'Flaherty, Co-Chairs, Senate Structure and Operations Committee

TO: The Columbia University Senate
DATE: September 16, 2025
RE: 2025 Quinquennial Reapportionment Report

EXECUTIVE SUMMARY

Section 21 of the Statutes as amended requires the Senate to reapportion eighty-five of its 111 seats every five years among the faculties of the Columbia Corporation and its affiliated institutions.¹ Seats subject to reapportionment are 43 for tenured officers of instruction, 17 for non-tenured officers of instruction, and 25 for students.

The Elections Code provides that the Elections Commission shall “advise the Senate” on the quinquennial reapportionment of seats.² This report responds to this charge by presenting (1) populations of each constituency to be reapportioned, (2) their changes since the last reapportionment, and (3) the Commission’s recommendations for reapportionment of seats. Based upon its analysis of the population data and application of relevant provisions of the amended Statutes (“the Statutes”) and Elections Code, the Commission recommends no changes in the apportionment of seats. This recommendation is the result of calculations described herein that could have resulted in changes

Reapportionment last occurred in 2020 and was effective for the Senate’s fall 2020 elections. The present reapportionment will be effective until the next scheduled reapportionment in 2030.

This report proceeds with an overview of reapportionment followed by a description of the Commission’s process, analysis, and specific recommendations. Detailed population data are presented as appendices.

OVERVIEW OF SENATE REAPPORTIONMENT

Because the University Senate was founded as a representative assembly within a dynamic institution, the need for its periodic reapportionment is clear. Inevitable change in the relative size of the University’s faculties and schools requires occasional checking and possible reallocation of seats to ensure the proportion of representation among the Senate’s constituencies remains stable over time.

In approaching its advisory role, the Commission was aided tremendously by Senate staff, especially Geraldine McAllister. Additionally, staff in the Provost’s Office of Planning and Institutional Research (OPIR)—particularly Cynthia Langin—and Office of Academic Appointments—particularly Zeid Sitnica—provided high-quality population data for the Senate’s various constituencies, as well as

¹ Statutes, §§ 21(a)(1), (a)(2) and (b), *available at* http://secretary.columbia.edu/files/secretary/university_charters_and_statutes/University%20Charters%20and%20Statutes_June%202013.pdf. We assume that the amendments to establish the Climate School have been adopted.

² *Id.* § 6.

guidance on how to interpret the data. The Commission is grateful to these individuals for their assistance.

PROCESS, ANALYSIS, AND RECOMMENDATIONS

The Statutes provide for periodic reapportionment of only three of the Senate’s eleven constituencies: (I) tenured officers of instruction, (II) non-tenured officers of instruction (“TTOT”) and (III) students. In each case, the apportionment language varies; so in each case, the Commission adjusted its methodology accordingly, as described below.

I. TENURED OFFICERS OF INSTRUCTION

The relevant language of the Statutes reads as follows:

The forty-two memberships for officers of instruction having an appointment without stated term [i.e., tenured] as professor or associate professor . . . shall be apportioned by the University Senate every five years among the Faculties of the Columbia Corporation in proportion to the number of such officers of instruction; provided, however, that each such faculty, other than the Faculties of Arts and Sciences and Health Sciences, which shall not be entitled to elect any members, shall be entitled to elect at least one member; and for the purposes of this paragraph (1), apportionment and election of members from the Faculties of the College, General Studies and the Graduate School of Arts and Sciences, treated as one group, shall be among the three disciplines of the Social Sciences, Humanities, and Pure Sciences, respectively [Section 21(a)(1)]

In December 2020, and in October 2021 the University Senate approved the following revised version of this section:

1. The forty-three memberships for officers of instruction having an appointment without stated term as professor or associate professor as defined in Sections 60 or 61 shall be apportioned by the University Senate every five years among the Faculties of the Columbia Corporation in proportion to the number of such officers of instruction. Each Faculty shall be entitled to elect at least one member, except for the Faculties of Columbia College, General Studies, the Graduate School of Arts and Sciences, the Arts, Professional Studies, and Health Sciences, which shall not be entitled to elect any members, except as specified below. For the purposes of this paragraph (1), and paragraph (2) below, for the apportionment and election of members from the Faculty of Arts and Sciences, each division of the Faculty of Arts and Sciences shall be treated as a separate Faculty.

The five divisions of the Faculty of Arts and Sciences are as follows:

- i. The Division of the Humanities shall consist of the following departments: Art History and Archaeology; Classics; East Asian Languages and Cultures; English and Comparative Literature; French and Romance Philology; Germanic Languages; Italian; Latin American and Iberian Cultures; Middle Eastern, South Asian, and African Studies; Music; Philosophy; Religion; and Slavic Languages.
- ii. The Division of Social Sciences shall consist of the following departments: African American and African Diaspora Studies, Anthropology, Economics, History, Political Science, and Sociology.
- iii. The Division of Natural Sciences shall consist of the following departments: Astronomy; Biological Sciences; Chemistry; Earth and Environmental Sciences; Ecology, Evolution, and Environmental Biology; Mathematics; Physics; Psychology; and Statistics.
- iv. The School of the Arts.
- v. The School of Professional Studies.

The chief discrepancies are the treatment of the Climate School, and the description of the Faculty of Arts and Sciences. The Climate School question is simple: did the addition of the Climate School and the Senate proposed revision of the Statutes increase the number of tenured Senators from 42 to 43? The Faculty of Arts and Sciences is a more complicated issue that we discuss in a special section below.

Population data. Population data for this constituency were provided by OAA. These data are current as of July 10, 2025 and are summarized in Appendix A.1.

Because the Statutes specify officers of instruction having an appointment “without stated term,” included in this constituency are both traditionally tenured officers and those with “tenure of title.”³ The Senate Bylaws also specify that officers with “tenure of title” should be considered in the count of tenured faculty.

³ This treatment is consistent with past practice. Additionally, *see* Columbia University Faculty Handbook (2008), <http://www.columbia.edu/cu/vpaa/handbook/instruction.html#tenureoftitle> (“Certain full-time officers of instruction in the Faculties of Dental Medicine, Medicine, Nursing, and Public Health who are not eligible for tenure may nonetheless receive tenure of title. While *those appointments are without stated term*, they do not provide a guarantee of salary from the University.”) (emphasis added).

Apportionment methodology. Due to the specific numbers of tenured officers in each faculty, and the fixed number of tenured officer seats, the ideal number of seats for each constituency is fractional and simple rounding awards does not guarantee the right total number of seats will be awarded. Therefore, it is necessary to use a more sophisticated apportionment method that ensures both proportional representation and assignment of the correct number of seats as designated by statute.

The mathematical problem of assigning seats subject to an integer constraint has been well studied and several different methods have been used or proposed. The Balinski-Young theorem (1982)⁴ shows that only “divisor methods” can simultaneously satisfy two highly desirable properties: population monotonicity (an increase in the population of school A with school B’s population unchanged will not cause a seat to be transferred from A to B) and house monotonicity (if the total number of seats increases, no school gets fewer seats). Divisor methods have 4 steps:

1. Choosing a trial ideal district size—“the divisor.”
2. For each school, dividing its population by the divisor to find a quotient—the number of seats it would have if the divisor were used. The quotient will almost never be an integer.
3. Rounding the quotient to an integer to get an integral number of seats for each school. More about this step later.
4. Adding up the rounded number of seats. If the sum of seats is 43, stop—the job is done. If the sum is less than 43, reduce the divisor and try again. If the sum is greater than 43, increase the divisor and try again.

Because divisor methods guarantee both population and house monotonicity, we will confine attention to these.

(Balinski and Young (1982) also prove that any method that satisfies population monotonicity violates the quota rule. The quota rule is that quotient always be rounded to either the smallest integer greater than itself or the largest integer smaller than itself. Divisor method cannot guarantee that the quota rule is never violated. In practice, however, violations of the quota rule are extremely rare. In the Elections Commissions experience in both 2020 and 2025, the quota rule has never been violated.)

Divisor methods differ in how they round quotients to integers—step 3. The two most popular divisor methods are called Hill’s method and Webster’s method. Webster’s method uses the method of rounding most of us learned in elementary school: round up to the next integer if the fractional part of the quotient is greater than a half; round down if it is less than a half. Hill’s method rounds up when the fractional part is greater than the geometric mean of the smaller integer and the larger integer; rounds down when it is less than the geometric mean.

Hill’s method has been used by the US House of Representatives since 1950 and by University Senate since at least 2010. Before we saw any data, we determined that we would continue that tradition. For purposes of illustration, we also continue the practice of using Webster’s method as well.

Table 1.a in the appendix shows the application of Hill’s method to the 2025 data, and Table 1.b shows the application of Webster’s method. For Hill’s we use a divisor of 31 and for Webster’s method we use a divisor of 30.9, but for each of the other methods there is a range of possible divisors around the value we used in these tables that will produce the same allocation.

⁴ Michael Balinski and H. Peyton Young, 1982, *Fair Representation: Meeting the Ideal of One Person, One Vote*, Yale University Press.

Our application of Webster's method has one deviation from the simple version. Because of the statutory requirement that each school with at least one tenured faculty member have at least one seat, any value of the divisor less than 1.5 and greater than zero is rounded to one. Because the geometric mean of 0 and 1 is 0, Hill's method automatically satisfies the statutory rule. Because the School of Professional Studies has zero tenured faculty, it is assigned zero seats.

Recommendations. Based upon its analysis of the population data, application of relevant provisions of the Statutes and Elections Code, and use of Hill's method described above, the Commission recommends no adjustments to the current allocation of seats. Since 2020, changes in the relative numbers of tenured faculty across schools are not large enough to justify any change.

We note, however,

1. If the number of seats for tenured faculty is 42, the Business School would lose one seat under Hill's method and the School of Medicine would lose one seat under Webster's method. Hence with 42 seats the two methods produce the same allocation.
2. If the number of seats is 43 but Webster's method is used, the Business School would lose one seat and the School of Medicine would gain one seat.

II. TTOT OFFICERS OF INSTRUCTION

The relevant language in the revised version of the Statutes reads as follows:

2. The seventeen memberships for officers of instruction with stated term shall be apportioned by the University Senate every five years among the Faculties of the Columbia Corporation other than the Faculties of Columbia College, General Studies, the Graduate School of Arts and Sciences, the Arts, Professional Studies, and Health Sciences, except as specified below. All such officers of instruction having an appointment as preceptor, associate, lecturer, instructor, and assistant professor, regardless of whether such officers are full time or part time, shall be entitled to vote.

Officers of instruction having an appointment with a stated term above that of assistant professor also shall be entitled to vote in this category. For the purposes of this paragraph (2), apportionment and election of members from the Faculties of Arts and Sciences, each division of the Faculty of Arts and Sciences, as specified in paragraph (1) above, shall be treated as a separate faculty.

The relevant language in the previous version of the Statutes read as follows:

The sixteen memberships for officers of instruction with stated term [i.e., non-tenured] shall be apportioned by the University Senate every five years among the Faculties of the Columbia Corporation other than the Faculties of Arts and Sciences and Health Sciences. . . . For the purposes of this paragraph (2), apportionment and election of members from the faculties of the College, General Studies and the Graduate School of Arts and Sciences, treated as one group, shall be among the three disciplines of the Social Sciences, Humanities, and Pure Sciences, respectively [Section 21(a)(2)]

The discrepancies are the same ones that appeared for the allocation of tenured faculty seats: Climate School and the Faculty of Arts and Sciences.

Population data. Current population data for this constituency were provided by OPIR as of July 1, 2025. These data are summarized in Appendix B.1.

Apportionment methodology. The 17 faculties of the University that include TTOT officers of instruction correspond perfectly with the 17 statutory seats designated for TTOT faculty. Thus, the simple apportionment of one seat per faculty follows past practice and remains appropriate.

Recommendations. Consistent with the Statutes and past practice, the Commission recommends that each faculty receive one seat. The Commission's reapportionment analysis and recommendations are presented in Appendix B.2.

If the number of TTOT seats is 16 rather than 17, the Statutes and Bylaws provide us no guidance and we have no recommendation.

III. STUDENTS

The relevant language in the amended Statutes is

The twenty-five memberships for full-time students shall be apportioned by the University Senate every five years as follows: twenty-three among the Faculties of the Columbia Corporation; provided, however, that at least one student member shall be elected from each Faculty other than the Faculties of Arts and Sciences and Health Sciences; two additional student members shall be elected from the Faculty with the largest number of full-time students; one additional student member shall be elected from each of the Faculties with the next largest number of full-time students; until the limit of twenty-three student seats for the Columbia Corporation is reached; one full-time student member shall be elected from Barnard College; and one full-time student member shall be elected from Teachers College. For the purposes of this subsection (b), the Faculty of the Graduate School of Arts and Sciences shall be treated as consisting of three separate Faculties, comprised of the divisions of the Humanities, Social Sciences, and Natural Sciences, respectively, as specified in paragraph (a.1) above. Students here are defined to include all those seeking degrees and all those non-degree-seeking students who have been designated as members of constituencies by the Senate By-Laws.

The relevant language in the previous version of the Statutes reads as follows:

The twenty-four memberships for students shall be apportioned by the University Senate every five years as follows: twenty-two among the faculties of the Columbia Corporation; provided, however, that at least one student member shall be elected from each Faculty other than the Faculties of Arts and Sciences and Health Sciences; two additional student members shall be elected from the Faculty with the largest number of full-time students; one additional student member shall be elected from each of the Faculties with the next largest number of students; until the limit of twenty-two student seats for the Columbia Corporation is reached; one student member shall be elected from Barnard College; and one student member shall be elected from Teachers College. For the purposes of this subsection (b), the Faculty of the Graduate School of Arts and Sciences shall be treated as consisting of three separate faculties, comprised of the disciplines of the Social Sciences, Humanities, and Pure Sciences, respectively [Section 21(b)]

The discrepancies are in the treatment of full-time students and the use of Section 153 to allocate students to schools and “disciplines.” We discuss the full-time issue in this section and the Section 153 issue as part of the larger discussion of the Faculty of Arts and Sciences.

Population data. Current population data for this constituency were provided by OPIR. These data are current as of November 2024 and are summarized in Appendix C.1. Additional current and historical population data for this constituency are available online at <http://www.columbia.edu/cu/opir/abstract/students.html>.

1. Who is counted.

- a. Full-time students. Under the revised version of the Statutes, it is clear that only full-time students count for the allocation of student seats.

If the revised version of the Statutes is not accepted, this interpretation should still hold. Without the 2020 amendments, the statutory language is ambiguous. In that case, there are two arguments for interpreting it the way we have proposed: first is precedent: the 2015 and 2020 Election Commissions both interpreted it that way. The second is the argument that the 2020 Elections Commission made from the principles of statutory interpretation:

“The relevant statutory language is clear that only full-time students are counted in the “Faculty with the largest number of full-time students,” which in this case was Columbia College. However, as the 2015 reapportionment report noted, the statutory language is not specific about whether only full-time students must be counted in “each of the Faculties with the next largest number of students.” The absence of “full-time” might suggest that all students, including part-time students, are to be counted in these population counts. Alternatively, the drafters of this provision might have merely omitted “full-time” from this sentence because the preceding sentence makes it sufficiently clear that only full-time students are to be counted.”

The 2020 Elections Commission argued that because the Statutes clearly require a count of only full-time students in at least one school (that with “the largest number of full-time students”), this approach is preferable in that it treats all schools equally.

- b. Degree-seeking and non-degree students. The 2020 Elections Commission found that neither the Statutes nor the Bylaws clarified whether non-degree-seeking students should be counted for purposes of apportionment and recommended that the issue be clarified. Following this recommendation, the Senate amended its bylaws in 2020 to state “Both degree-seeking and non-degree seeking students may be members of constituencies” (section 1 c (v)). Accordingly we count both degree-seeking and non-degree-seeking full-time students.

2. How students are assigned to constituencies.

- a. Certain Ph.D. candidates in GSAS. Some Ph.D. candidates, although officially enrolled in the Graduate School of Arts and Sciences (GSAS), pursue academic programs administered by other schools. (For instance, the Graduate School of Business and School of Engineering and Applied Science administer Ph.D. programs, the degree for which is awarded by GSAS.) Consistent with past practice and OPIR’s tabulation of the data, the Commission counted each student as part of the school that administers their program, rather than as part of GSAS. We discuss this issue at greater length in the section on the Faculty of Arts and Sciences and Section 153.
- b. Dual-degree students. Students enrolled in dual-degree or joint programs, such as a JD/MBA program, are classified by OPIR according to whichever “certifying office school” they were enrolled in during the fall 2024 term. Each school’s population count may include a certain number of dual-degree students, but these students were only counted once for reapportionment purposes.
- c. Office of Global Programs. OPIR reported no students under the Office of Global Programs
- d. Pure Sciences students. The following departments were counted under Pure Sciences for purposes of reapportionment: Astronomy; Biological Sciences; Chemistry; Earth and Environmental Sciences; Ecology, Evolution and Environmental Biology; Mathematics; Physics; Psychology; and Statistics.

Although the text of Section 21(b) of the Statutes calls for the Commission to refer to Section 153 in determining which departments constitute Pure Sciences, we realized that adhering strictly to Section 153 here would have caused illogical and extremely disruptive results. Thus, we instead adhered to the well-established understanding of Pure Sciences that is shared by all relevant stakeholders. Under this understanding, Pure Sciences includes the following nine departments: Astronomy; Biological Sciences; Chemistry; Earth and Environmental Sciences; Ecology, Evolution and Environmental Biology; Mathematics; Physics; Psychology; and Statistics.

The 2020 commission wrote:

“Section 153 of the Statutes describes Pure Sciences as comprised of 28 diverse departments, including many that clearly belong in the School of Engineering and Applied Science (e.g., Chemical Engineering, Electrical Engineering, and Mechanical Engineering). However, when the [2020] Commission spoke to several experts on this topic—including Pearl Spiro, Associate Provost for Academic Appointments, Office of the Vice Provost for Faculty Affairs; Andrea Solomon, Vice Dean and Dean of Academic Affairs, GSAS; Lucy Drotning, Associate Provost, OPIR; and Ryan Brown, Research Analyst, OPIR—we learned that all of the offices represented share an understanding of what departments constitute Pure Sciences that deviates significantly from Section 153. According to these experts, Pure Sciences is unquestionably made up of the nine departments listed above: Astronomy; Biological Sciences; Chemistry; Earth and Environmental Sciences; Ecology, Evolution and Environmental Biology; Mathematics; Physics; Psychology; and Statistics.

If we were to have adhered closely to Section 153, we would have counted students under Pure Sciences who are not considered by any office in the University, including GSAS, to be Pure Sciences students. In addition, we would have deviated dramatically from the methodology of the 2015 reapportionment; the Elections Commission that conducted that reapportionment also understood Pure Sciences to consist of the above nine departments. Our deviating from the methodology of the 2015 reapportionment in this way would have potentially resulted in an unprecedented and highly disruptive shift of student Senate seats among schools, not because of relevant changes in student population but because of a change in methodology between two quinquennial reapportionments. This was not an acceptable result to us.

We have concluded from this process that Section 153 of the Statutes should be amended to reflect the understanding of Pure Sciences that is shared by GSAS, OPIR, and the Office of the Vice Provost for Faculty Affairs. We have included this in our recommendations below.”

The Senate’s amendments resolve this issue in the manner the 2020 commission recommended (although these amendments use direct enumeration in chapter 20 in place of the references to section 153).

In the absence of these amendments, we would continue the practice of the 2020 commission.

Apportionment methodology. The Statutes provide that all schools shall receive at least one seat and the school with the largest population shall receive three. Whatever seats are left over after that go to the second largest, third largest, fourth largest, and so on, until all the seats are used up. As a

result, past practice has awarded a total of two seats to each of the schools with the second and third largest populations.

Recommendations. Based upon its analysis of the population data, and application of relevant provisions of the Statutes and Elections Code, the Commission recommends no changes to the current apportionment of student seats.

If there are only 22 seats for Columbia Corporation Schools rather than 23, the Business School would lose one seat.

The Commission's reapportionment analysis and recommendations are presented in Appendix C.2.

THE FACULTY OF ARTS AND SCIENCES

The Faculty of Arts and Sciences was established in its current form in the 1990s, well after the University Senate was established, and before the Senate's revision in 2020, the Statutes did not reflect current reality. The language in those Statutes was unworkable and it affected both faculty and students. There were three main problems.

1. Archaic language: "Pure sciences" for "natural sciences" and "disciplines" for "divisions."
2. Archaic organization chart for faculty. Unfortunately, the previous version of the Statutes had this relationship precisely backwards so that if read literally, it would disenfranchise the entire Faculty of Arts and Sciences.

The Faculty of Columbia College, the Faculty of General Studies, and the Faculty of the Graduate School of Arts and Sciences are vestigial. OPIR counts no members. No one is appointed to them. They do not hold meetings. (By statute the deans and the president of university are members of these faculties, but they do not count as tenured faculty for Senate purposes.) Instructors for the students in those schools are appointed to the Faculty of Arts and Sciences. That is how OPIR counts them. Two members of the Elections Commission are members of the Faculty of Arts and Sciences. We do not report to the deans of any of the three schools; through our department chairs and divisional deans, we report to the Executive Vice President of Arts and Sciences.

Thus the previous version of the Statutes assigns no seats to the one Faculty with members and it assigns seats to the three Faculties with no members.

3. Section 153. For both faculty and students, the previous version of the Statutes incorporates by reference Statute section 153 to delineate the three divisions ("disciplines") of the Arts and Sciences. The delineation in section 153 is substantially different from the delineation that the rest of the University uses. We have quoted the 2020 commission's reasoning in the section on students.

SUMMARY OF RECOMMENDATIONS

In this quinquennial reapportionment report, the Elections Commission has offered recommendations concerning apportionment of University Senate seats. A summary of all recommendations follows.

**Commission Recommendations Concerning
Apportionment of University Senate Seats**

Tenured Officers of Instruction	TTOT Officers of Instruction	Students
	all constituencies <i>no change</i>	<i>no change</i>
all constituencies <i>no change</i>		

ELECTIONS COMMISSION

2025

Brendan O’Flaherty
*Professor of Economics,
Department of Economics*

Melinda Aquino
*Associate Dean of Multicultural
Affairs,
CC/SEAS Undergrad
Student Life*

Ann Thornton
*Vice Provost and University
Librarian*

Sarah J.R. Hansen
*Senior Lecturer in the Discipline of
Chemistry,
Department of Chemistry*

Batya Tropper, Chair
*Student
School of Law*

Appendix A.1

Tenured Faculty: Population Count

	Fall 2014				Fall 2019				Summer 2025		
	Ten- ure	Tenure of Title**	Total Tenured		Tenure	Tenure of Title**	Total Tenured		Tenure	Tenure of Title**	Total Tenured
ARTS AND SCIENCES											
Columbia College, General Studies and GSAS	430	0	430		446	0	446		436	0	436
--Social Sciences	122	0	122		126	0	126		119	0	119
--Humanities	148	0	148		151	0	151		157	0	157
--Pure Science	160	0	160		169	0	169		160	0	160
Arts	11	0	11		19	0	19		26	0	26
Professional Studies (previously Continuing Education)	0	0	0		0	0	0		0	0	0
MORNINGSIDE PROFESSIONAL SCHOOLS											
Architecture, Planning, and Preservation	18	0	18		20	0	20		20	0	20
Business	75	0	75		79	0	79		77	0	77
Engineering and Applied Science	129	0	129		138	0	138		167	0	167
Journalism	19	0	19		20	0	20		14	0	14
Law	71	0	71		62	0	62		61	0	61
Social Work	18	0	18		16	0	16		20	0	20
Climate	0	0	0		0	0	0		7	0	7
International and Public Affairs	14	0	14		16	0	16		17	0	17
MEDICAL CENTER PROFESSIONAL SCHOOLS											
Dental Medicine	5	5	10		5	4	9		7	2	9
Medicine	226	29	255		264	16	280		282	12	294
Nursing	5	0	5		6	0	6		10	0	10
Public Health	53	1	54		57	1	58		58	1	59
UNIVERSITY TOTAL	1,074	35	1,109		1,148	21	1,169		1,202	15	1,217

Notes

Shaded rows indicate Senate constituencies

Source: Office of the Vice Provost for Academic Administration

Only officers with primary appointments are included. Those with secondary appointments (e.g. deans who are also professors) are included in the constituency of their primary appointment (e.g., administration members). Likewise, officers with multiple academic appointments are included in the constituency of their primary appointment.

Date: As of July 2025

Appendix A.2

Tenured Faculty: Commission Recommendations

Faculty or Academic Division <i>(descending order of 2025 population)</i>	2014 Tenured Faculty	2019 Tenured Faculty	2025 Tenured Faculty	2015 Seats	2020 Seats	2026 Seats	Change From 2020 Seats
Medicine	255	280	294	9	9	9	0
Engineering and Applied Science	129	138	167	4	5	5	0
A&S – Pure Sciences	160	169	160	6	5	5	0
A&S - Humanities	148	151	157	5	5	5	0
A&S – Social Sciences	122	126	119	4	4	4	0
Business	75	79	77	3	3	3	0
Law	71	62	61	2	2	2	0
Public Health	54	58	59	2	2	2	0
Arts	11	19	26	1	1	1	0
Social Work	18	16	20	1	1	1	0
Architecture, Planning, and Preservation	18	20	20	1	1	1	0
International and Public Affairs	14	16	17	1	1	1	0
Journalism	19	20	14	1	1	1	0
Nursing	5	6	10	1	1	1	0
Dental Medicine	10	9	9	1	1	1	0
Climate*	0	0	7	0	0	1	+1
Professional Studies**	0	0	0	0	0	0	0
UNIVERSITY SENATE TOTAL	1109	1169	1217	42	42	43	+1

NOTES

As explained in the reapportionment report, these calculations are made using the Method of Equal Proportions, employed by the U.S. Census Bureau since 1950 to reapportion congressional seats among the several states. See 2 U.S.C. § 2a(a) (2006); see also http://en.wikipedia.org/wiki/Huntington-Hill_method. This method minimizes the percentage differences in the number of persons-per-Senator among all constituencies with multiple seats.

*The Senate approved the expansion of its membership to accommodate the addition of the Climate School in 2021

**The Faculty of Professional Studies, having zero tenured officers of instruction, has previously not received representation in this category. See Appendix B.2 for non-tenured representation.

Appendix B.1

TTOT Faculty: Population Count

	Fall 2014				Fall 2019				Summer 2025		
	Tenure Eligible	Non-tenure Eligible	Total TTOT		Tenure Eligible	Non-tenure Eligible	Total TTOT		Tenure Eligible	Non-tenure Eligible	Total TTOT
ARTS AND SCIENCES											
Columbia College, General Studies and GSAS	155	223	378		170	251	378		138	265	403
--Social Sciences	44	29	73		45	35	80		41	31	72
--Humanities	48	159	207		58	168	226		40	183	223
--Pure Science	63	35	98		67	48	115		57	51	108
Arts	9	50	59		21	47	68		15	46	96
Professional Studies (previously Continuing Education)	0	25	25		0	56	56		0	47	47
MORNINGSIDE PROFESSIONAL SCHOOLS											
Architecture, Planning, and Preservation	11	6	17		8	10	18		9	10	19
Business	52	12	64		49	18	67		44	27	71
Engineering and Applied Science	48	22	70		58	31	89		53	37	90
Journalism	5	10	15		6	10	16		5	14	19
Law	7	14	21		5	15	20		9	11	20
Social Work	22	3	25		19	2	21		8	9	17
Climate*	0	0	0		0	0	0		4	5	9
International and Public Affairs	13	32	45		21	47	68		8	36	44
MEDICAL CENTER PROFESSIONAL SCHOOLS											
Dental Medicine	4	59	63		3	70	73		2	63	65
Medicine	187	1,515	1,702		179	1,877	2,056		179	2,154	2,333
Nursing	7	66	73		6	84	90		11	66	77
Public Health	40	81	121		42	86	128		46	77	123
UNIVERSITY TOTAL	560	2,118	2,678		575	2,585	3,160		531	2,867	3,398

Shaded rows indicate Senate constituencies

Source Summer 2025: Office of the Vice Provost for Faculty Affairs

Only officers with primary academic appointments are included. Those with secondary appointments (e.g., deans who are also processors) are included in the constituency of their primary appointment (e.g., administration members). Likewise, officers with multiple academic appointments are included in the constituency of their primary appointment.

*The Senate approved the expansion of its membership to accommodate the addition of the Climate School in 2021

Data as of July, 2025

Appendix B.2

TTOT Faculty: Commission Recommendations

Faculty or Academic Division (descending order of 2025 population)	2014 TTOT Faculty	2019 TTOT Faculty	2025 TTOT Faculty	2015 Seats	2020 Seats	2025 Seats	Change From 2020 Seats
Medicine	1,702	2,056	2,333	1	1	1	<i>no change</i>
A&S - Humanities	207	226	223	1	1	1	<i>no change</i>
Public Health	121	128	123	1	1	1	<i>no change</i>
A&S – Pure Sciences	98	115	108	1	1	1	<i>no change</i>
Engineering and Applied Science	73	90	90	1	1	1	<i>no change</i>
Nursing	70	89	77	1	1	1	<i>no change</i>
A&S – Social Sciences	73	80	72	1	1	1	<i>no change</i>
Business	64	67	71	1	1	1	<i>no change</i>
Dental Medicine	63	73	65	1	1	1	<i>no change</i>
Arts	59	68	61	1	1	1	<i>no change</i>
Professional Studies	25	56	47	1	1	1	<i>no change</i>
International and Public Affairs	45	37	44	1	1	1	<i>no change</i>
Social Work	25	21	17	1	1	1	<i>no change</i>
Law	21	20	20	1	1	1	<i>no change</i>
Architecture, Planning, and Preservation	17	18	19	1	1	1	<i>no change</i>
Journalism	15	16	19	1	1	1	<i>no change</i>
Climate*	0	0	9	0	0	1	<i>+1</i>
UNIVERSITY SENATE TOTAL	2,678	3,160	3,398	16	16	17	

NOTES

*The Senate approved the expansion of its membership to accommodate the addition of the Climate School in 2021

Appendix C.1

Students: Population Count

	Fall 2014			Fall 2019				Fall 2024				
	Full-time Degree En- rollment	Full- time Enroll- ment †		Full- time Degree Enroll- ment	Full- time Non- Degree Enroll- ment	Full- time Enroll- ment †		Full- time Degree Enroll- ment	Full- time Non- Degree Enroll- ment	Full- time Enroll- ment †		Change from 2019 to 2025
ARTS AND SCIENCES												
Columbia College	4,576	4,650		4,588	89	4,677		4,868	68	4,936		259
Graduate School of Arts and Sci- ences	2,907	2,908		3,487	29	3,516		3,306	19	3,325		-191
Social Sciences	774	774		1,082		1,082		1,136	7	1,143		61
Humanities	806	807		830		830		657	4	661		-169
Natural (Pure) Sciences	1,327	1,327		1,575		1,575		1,513	9	1,522		-53
General Studies	1,308	1,308		1,735	1	1,736		2,132		2,132		396
Arts	804	810		856		856		764		764		-92
Professional Studies	421	956		1,571	262	1,833		1,971	101	2,072		239
MORNINGSIDE PROFESSIONAL SCHOOLS												
Architecture, Planning, and Preserva- tion	765	780		771	8	779		767	4	771		-8
Business	1,871	1,883		1,980	23	2,003		2,347	32	2,379		376
Climate								113	0	113		113
Engineering and Applied Science	3,418	3,421		4,142	2	4,144		4,691	7	4,698		554
International and Public Affairs	1,226	1,227		1,142	1	1,143		1,217		1,217		74
Journalism	333	333		291	0	291		241		241		-50
Law	1,483	1,518		1,562	50	1,612		1,660	49	1,709		97
Social Work	860	860		906	0	906		1,034		1,034		128
MEDICAL CENTER PROFES- SIONAL SCHOOLS												
College of Physicians and Surgeons	1461	1726		1450	243	1693		1422	280	1702		9
Dental Medicine	407	413		438	0	438		439	5	444		6
Nursing	456	456		662	1	663		485	15	500		-163
Public Health	1100	1100		1272	0	1272		1298	0	1298		26
UNIVERSITY TOTAL	23,396	24,349		26,853	709	27,562		28,755	580	29,335		1,773

NOTES

Shaded rows indicate Senate constituencies

Source Fall 2014: Student Information Systems, Student Information Systems, available upon request from the Office of Planning and Institutional Research.

Additional data provided by the Office of Planning and Institutional Research.

Source Fall 2019: Preliminary data from Student Information Systems to be uploaded to

https://provost.columbia.edu/sites/default/files/content/Institutional%20Research/Statistical%20Abstract/opir_enrollment_degree_level.pdf.

Source Fall 2024: Office of Planning and Institutional Research

† Includes degree and non-degree students.

Appendix C.2

Students: Commission Recommendations

School or Academic Division (descending order of 2024 full-time enrollment)	2009	2015	2019	2024	2010	2015	2020	2025	Change From 2015 Seats
	Full-time Enrollment	Full-time Enrollment	Full-time Enrollment †	Full-time Enrollment †	Seats	Seats	Seats	Seats	
Columbia College	4,363	4,650	4,677	4,936	3	3	3	3	<i>no change</i>
Engineering and Applied Science	2,682	3,421	4,144	4,698	2	2	2	2	<i>no change</i>
Business	2,012	1,883	2,003	2,379	2	2	2	2	<i>no change</i>
General Studies	826	1,308	1,736	2,132	1	1	1	1	<i>no change</i>
Professional Studies	404	956	1,833	2,072	1	1	1	1	<i>no change</i>
Law	1,612	1,518	1,612	1,709	1	1	1	1	<i>no change</i>
College of Physicians and Surgeons	1,378	1,726	1,693	1,702	1	1	1	1	<i>no change</i>
GSAS – Natural (Pure) Sciences	984	1,327	1,575	1,522	1	1	1	1	<i>no change</i>
Public Health	669	1,100	1,272	1,298	1	1	1	1	<i>no change</i>
International and Public Affairs	1,164	1,227	1,143	1,217	1	1	1	1	<i>no change</i>
GSAS – Social Sciences	638	774	1,082	1,143	1	1	1	1	<i>no change</i>
Social Work	813	860	906	1,034	1	1	1	1	<i>no change</i>
Architecture, Planning, and Preservation	738	780	779	771	1	1	1	1	<i>no change</i>
Arts	871	810	856	764	1	1	1	1	<i>no change</i>
GSAS – Humanities	846	807	830	661	1	1	1	1	<i>no change</i>
Nursing	398	456	663	500	1	1	1	1	<i>no change</i>
Dental Medicine	395	413	438	444	1	1	1	1	<i>no change</i>
Journalism	344	333	291	241	1	1	1	1	<i>no change</i>
Climate School				113				1	
Columbia Corporation Total	21,137	24,349	27,533	29,335	22	22	22	23	
Barnard College					1	1	1	1	<i>no change</i>
Teachers College					1	1	1	1	<i>no change</i>
Affiliated Institution Total**					2	2	2	2	
University Senate Total					24	24	24	25	

Notes: Pursuant to the Senate By-Laws, Section 1(g), the Union Theological Seminary may elect one non-voting student observer who enjoys a limited role in Senate deliberations.

† Including both degree seeking and non-degree students.

Appendix on the Reapportionment of Tenured Faculty Seats

A. Why use geometric means

As noted, our decision to use Hill's method was based on University precedent and the example of the US House of Representatives and was made before we saw the data. However, some readers may find the use of geometric means in that method strange. After all, arithmetic means are what we grew up on. The purpose of this section is to explain a rationale for using geometric means. We are following a tradition and set of precedents, but those traditions and precedents are not implausible.

To begin, let's examine the rationale for using arithmetic means. Suppose that quotient q for some school is between two integers n and $(n+1)$. Since q can be thought of as the ideal number of seats that school should have in the absence of the integer constraint, one principle we might want to use is to say that we want to choose the lower integer n if and only if doing so makes the "absolute distortion" from doing so less than the "absolute distortion" from choosing the higher integer $(n+1)$. Here we define the absolute distortion from choosing the lower integer as $(q-n)$ and absolute distortion from choosing the higher integer as $(n+1-q)$. Then a little algebra shows that we should choose the lower integer if and only if $q < n + 1/2$, which is the arithmetic mean. So the principled argument for using Webster's method is that it minimizes the absolute distortion.

While minimizing the absolute distortion leads to an easy formula, arguments can be made for other criteria. Another criterion that has sometimes been appealed to is minimizing the proportional distortion. The distortion from losing, say, a half a seat from the ideal may be more serious for a school that has only two or three seats than for a school that has between nine and ten seats. The distortion for the smaller school is a much larger fraction of its representation than the distortion for the larger school. Define the proportional distortion from choosing the lower integer n as $\ln q - \ln n$ and the proportional distortion from choosing the higher integer as $\ln (n+1) - \ln q$. There is an argument for minimizing the proportional distortion instead of the absolute distortion. Algebra in this case will show that minimizing the proportional distortion implies choosing the lower integer if and only if $\ln q < [\ln (q+1) + \ln q]/2$ which is the logarithm of the geometric mean. This is Hill's method.

Schools with an ideal number of seats less than one-half present a direct contrast between Hill's method and Webster's method. Hill's method says that they should have one seat and Webster's method (applied literally) says that they should have no seats. The statutory requirement that they have one seat in this case suggests a statutory preference for Hill's method.

Hill's method minimizes proportional distortion and Webster's method minimizes absolute distortion. Reasonable arguments can be made for either criterion and its accompanying method. In this situation, we chose Hill before we saw the data because of tradition and precedent.

B. Graphical analysis

We have found a convenient graph to illustrate the reapportionment possibilities with any divisor method. We illustrate with Hill's method.

Given a data set and a method, any divisor determines a number of seats and an allocation among schools. For instance, take the smallest usable divisor: 1. If our ideal apportionment has one Senator per tenured faculty member, then we have 1217 Senators (the number of tenured faculty) and each school has

the number of seats equal to its number of tenured faculty. No rounding needs to be done, and so Hill's and Webster's methods agree. So for a divisor of 1, the number of seats is 1217.

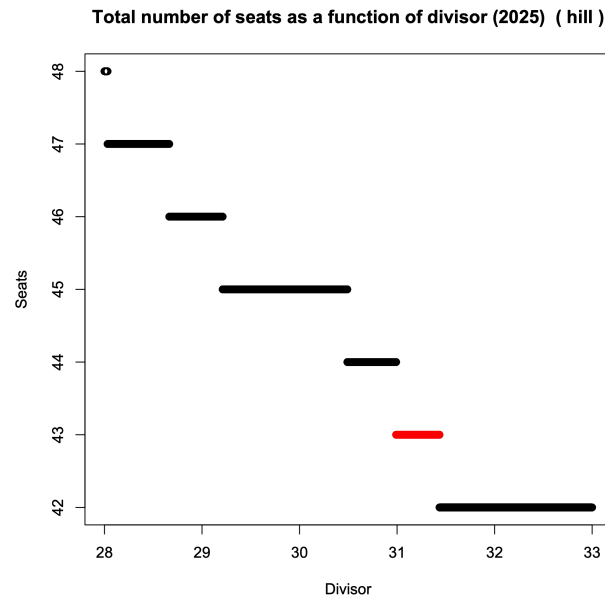
At the other extreme, a divisor of 294 (the population of the largest school) implies 17 seats, one for each school. Hill and Webster again agree. Increasing the divisor from 1 to 294 drastically reduces the number of seats.

Since we need to allocate 43 seats, a divisor of 1 is too small and a divisor of 294 is too big. We can think of the number of seats as a function of the divisor and graph the divisor on the horizontal axis and the number of seats on the vertical. This function will be (weakly) decreasing: as the divisor increases, the number of seats falls or stays the same. This is illustrated for Hill's method in figure 1 below. The figure concentrates on values of the divisor between 26 and 35 because away from this range the number of seats is far from 43.

The function in figure 1 is a step function. For many values of the divisor, small changes in the divisor cause no change in the number of seats. At occasional intervals, though, as the divisor falls, a school's rounded number of seats will fall enough that the number of seats that it is awarded falls by one, and so the total number of seats also falls by one.

In figure 1, for instance, the number of seats as a function of the divisor stays at 43 (the desired number) as long as the divisor is greater than 30.990, where P&S loses one seat from 10 to 9, and 31.441, where the Business School loses one seat from 3 to 2.

Figure 1:
Total Number of Seats as a Function of Divisor (2025) (Hill)



C. Proposed allocation of seats

Table 1.a below shows our reapportionment calculation. We use a divisor of 31; as we saw above, any divisor in the range [30.990, 31.441] would produce the same allocation of seats.

Table 1.a
Tenured Faculty: Commission Analyses (Divisor=31)

Table 1.a.	divisor	31			
Faculty of Academic Division (descending order of 2024 population)	Tenured	Ideal	G. Mean	Rounded	2025 Allocation
Architecture, Planning & Preservation	26	0.838710	1.414	1	1
Arts	20	0.645161	1.414	1	1
Business	77	2.483871	2.449	3	3
Climate	7	0.225806	1.414	1	1
Dental Medicine	9	0.290323	1.414	1	1
Engineering	167	5.387097	5.477	5	5
Humanities	157	5.064516	5.477	5	5
International & Public Affairs	17	0.548387	1.414	1	1
Journalism	14	0.451613	1.414	1	1
Law	61	1.967742	1.414	2	2
Natural Sciences	160	5.161290	5.477	5	5
Nursing	10	0.322581	1.414	1	1
Physicians & Surgeons	294	9.483871	9.487	9	9
Professional Studies	0	0.000000		0	0
Public Health	59	1.903226	1.414	2	2
Social sciences	119	3.838710	3.464	4	4
Social Work	20	0.645161	1.414	1	1
Total	1217			43	43

Notice that both the Business School and the College of Physicians and Surgeons have the same fractional part—0.483871—but the Business School is rounded up and P&S is rounded down. This illustrates how Hill's method differs from Webster's method. If we used Webster's method, both would be rounded down and there would be only 42 seats. We would have to increase the divisor to get 43. Intuitively, the Business School would suffer roughly a 20% loss in representation relative to its ideal if it were to lose one seat, while P&S would suffer roughly a 5% loss in representation relative to its ideal if it were to lose one seat. Hill's method causes the seat whose loss would result in the larger percentage decrease in representation to be preserved.

The allocation of 43 seats under Webster's method is in table 1.b

Table 1.b
Tenured Faculty: Commission Analyses (Divisor=30.9)

Table 1.b (Webster's Method)	divisor	30.9		
Faculty of Academic Division (descending order of 2024 population)	Tenured	Ideal	A. Mean	2025 Allocation
Architecture, Planning & Preservation	26	0.841424	1.5	1
Arts	20	0.647249	1.5	1
Business	77	2.491909	2.5	2
Climate	7	0.226537	1.5	1
Dental Medicine	9	0.291262	1.5	1
Engineering	167	5.404531	5.5	5
Humanities	157	5.080906	5.5	5
International & Public Affairs	17	0.550162	1.5	1
Journalism	14	0.453074	1.5	1
Law	61	1.974110	1.5	2
Natural Sciences	160	5.177994	5.5	5
Nursing	10	0.323625	1.5	1
Physicians & Surgeons	294	9.514563	9.5	10
Professional Studies	0			0
Public Health	59	1.909385	1.5	2
Social Sciences	119	3.851133	3.5	4
Social Work	20	0.647249	1.5	1
Total	1217			43

University Senate

Proposed: October 24, 2025

Adopted: October 24, 2025

75-0-0: In favor-opposed-abstained

**RESOLUTION TO APPROVE THE ESTABLISHMENT OF THE
COLUMBIA INSTITUTE FOR CELL ENGINEERING AND THERAPY (CICET)**

WHEREAS the Vagelos College of Physicians and Surgeons (VP&S) proposes the establishment of a new institute dedicated to advancing research in cell and gene therapies, a field that has witnessed revolutionary development over the past decade and has the potential to treat or cure diseases including cancer, autoimmunity, and neurological conditions; and

WHEREAS the Institute will develop a comprehensive academic ecosystem including doctoral training, a master's degree program, professional certificate programs, and a fellowship program for medical doctors, to recruit and train the next generation of leaders in the field; and

WHEREAS the Institute brings together its educational ecosystem and scientific innovation with clinical and business partners to support a translational pathway from discovery research to clinical development of cell and gene therapies, taking advantage of Columbia's new state-of-the-art cGMP production facility dedicated to cell and gene manufacturing and promoting equitable and inclusive access to therapies for patients; and

WHEREAS the Institute will utilize its resources to recruit additional laboratory based faculty and serve as a forum and collaborative hub aligning Columbia's public mission to advance and implement cell and gene therapies, eventually partnering with industry for their commercialization; and

WHEREAS in accordance with the University Statutes, the President has authorized the establishment of an Institute for these purposes, to be based in the Vagelos College of Physicians and Surgeons; and

WHEREAS in accordance with the Statutes, the University Senate is also required to approve the establishment of new Institutes, and the Senate Education Committee now recommends this action;

THEREFORE BE IT RESOLVED that the University Senate approve the establishment of the Columbia Institute for Cell Engineering and Therapy (CICET); and

BE IT FURTHER RESOLVED that the University Senate forward this resolution to the University Trustees for appropriate action.

Proponent: Education Committee

Columbia's Initiative in Cell Engineering and Therapy

Proposal: Establishment of the Columbia Institute for Cell Engineering and Therapy

Columbia University stands at a pivotal moment in the evolution of cell-based therapeutics, with the past decade witnessing a revolution in the development of “living drugs” to treat and potentially cure a variety of pathologies, including cancer, autoimmunity, and neurological disorders. These transformative advances require integration of fundamental biology, computational science, engineering, and clinical medicine – all areas of excellence at Columbia University. The approval of the **Columbia Institute for Cell Engineering and Therapy (CICET)** by Columbia University's Board of Trustees will position Columbia to lead the way in cell and gene therapy. CICET is a University-wide academic initiative that draws upon Columbia's collective excellence across Columbia University Irving Medical Center, Morningside, and Manhattanville campuses, while also leveraging Columbia's longstanding clinical partnership with New York-Presbyterian Hospital (NYP). At its helm is **Michel Sadelain, MD, PhD**—an internationally renowned leader in chimeric antigen receptor (CAR) T-cell therapy and founder of the Center for Cell Engineering at Memorial Sloan Kettering Cancer Center—who has been appointed CICET's inaugural Director.

With this proposal, **we seek the formal designation of CICET as an Institute**—an essential step in transforming this academic initiative into a strategic pillar of the University. CICET's Institute status will anchor CICET in Columbia's long-term vision for cross-disciplinary excellence, translational leadership, and institutional stewardship, and will accelerate the University's emergence as a global leader in the expanding field of cell engineering and cell therapy.

Columbia Institute for Cell Engineering and Therapy Mission

The overarching goal of CICET is to **advance the potential of human cell engineering to yield curative therapies**. As a cross-disciplinary hub for scientific discovery, translational research, and clinical application, CICET is uniquely positioned to lead the next generation of cell-based treatment innovations.

CICET's mission is organized around three core pillars:

1. **To promote and strengthen the research continuum** between the biological, translational, manufacturing, and clinical dimensions of cell engineering and therapy;
2. **To establish comprehensive academic programs** that formally train the next generation of leaders in cell engineering and advanced cell therapy manufacturing; and,
3. **To advocate for equitable and inclusive access** to emerging cell and gene therapies for Columbia's local patient population, ensuring broad societal benefits.

Under Dr. Sadelain's leadership, CICET is developing cell therapy production infrastructure that adheres to current Good Manufacturing Practices (cGMP), recruiting a new cadre of scientists in cell engineering and therapy, and fostering interdisciplinary collaborations across Columbia's centers of excellence in bioengineering, genome engineering, immunology, stem cell biology, systems biology, and regenerative medicine.

Harnessing these collective efforts, CICET will develop novel therapeutic platforms—from engineered immune cells and regenerative approaches to synthetic biology solutions—and translate them through in-house cell production and early-phase clinical testing. These efforts will advance a wide range of therapeutic areas, including cancer, autoimmunity, inherited genetic disorders, neurological disorders, infectious diseases, transplantation, and tissue regeneration.

Columbia's Initiative in Cell Engineering and Therapy

In parallel, CICET is building a comprehensive educational ecosystem designed to equip scientists, clinicians, and technical experts with the leadership skills necessary for cell and gene therapy and the broader transformative therapeutic landscape. Its programs will be designed to train the future workforce and to foster a culture of ethical responsibility and inclusivity in the development and delivery of advanced cell therapeutics.

By combining scientific innovation and education with business and regulatory innovation, CICET aims to establish Columbia University as a global leader in the development, delivery, and democratization of transformative cell-based treatments. This ecosystem will be the first of its kind in New York City, supporting therapeutic applications that go beyond cancer, buoyed by our research excellence across Columbia's campuses.

Columbia Institute for Cell Engineering and Therapy Scope

In its broadest definition, cell therapy encompasses the full spectrum of cell and gene therapies. Therapeutic cells may be genetically engineered to correct disease-causing defects or to program new functions. CICET focuses on both the study and development of extra-corporeal cell production and *in vivo* gene therapy, based on either nucleic acid delivery (oligonucleotides, mRNA, or DNA) or genome editing.

A core tenet of CICET's translational mission is the development of cGMP manufacturing capabilities on campus to support and enhance investigator-initiated research and enable early-phase clinical trials. With support from the Provost's office and investment from the medical school, Columbia has recently completed construction on a new state-of-the-art cGMP production facility dedicated to cell and gene therapies. This facility will enable the rapid, flexible, and cost-effective development of novel therapies. CICET's cGMP facility will function as a centralized hub for all cell therapy programs with clinical potential, enabling Columbia to lead in both innovation and implementation.

In addition to enabling core research and development, CICET's infrastructure is strategically designed **to support the full translational pathway from discovery to first-in-human trials** that will be a beacon for translational research at Columbia. The Institute will provide robust program management to support the integration of resources for vector design and production, cell processing, quality control, and regulatory documentation, enabling Columbia investigators to effectively navigate the complexities of Investigational New Drug (IND) applications for novel cell and gene therapies to the FDA. By embedding process development, technology transfer, and regulatory guidance within an academic setting, CICET will empower Columbia faculty to launch investigator-initiated trials and accelerate novel therapies toward clinical impact. This capacity not only enhances Columbia's competitiveness in translational research but also reinforces its role as a self-sustaining engine of innovation, de-risking early-stage technologies and preparing them for academic-industry partnerships or commercialization.

Education and workforce development are another core tenet of CICET. As an Institute, CICET aims to train the next generation of scientists, bioengineers, clinicians, and professionals in manufacturing and regulatory fields with specialized expertise in cell and gene therapy. The proposed **Columbia Institute for Cell Engineering and Therapy** is uniquely positioned to lead this effort at Columbia University.

Columbia's Initiative in Cell Engineering and Therapy

CICET will develop and deliver a **comprehensive, multi-level academic training ecosystem**, including:

- **Doctoral training** that integrates cell therapy-focused research into the newly proposed Biomedical Life Sciences Program tracks of the Vagelos Institute, including Disease and Therapeutics, Cancer Biology, and Cell and Molecular Biology, and in Columbia's biomedical-engineering program
- A dedicated **master's degree program** in Cell Engineering and Therapeutic Technologies, designed to prepare graduates for both academic and industry careers
- **Professional certificate programs** in areas such as GMP manufacturing, regulatory science, and vector development—serving the growing demand for technical and/or specialized training in translational research, biotechnology, and clinical and regulatory affairs. These programs may be offered in collaboration with the Columbia University School of Professional Studies (SPS).

To address clinical workforce development, CICET will also establish a **fellowship program for medical doctors** in translational cellular therapeutics. These fellowships will provide advanced training in trial design, regulatory science, immune monitoring, and patient-centered delivery of cell therapies.

CICET will amplify Columbia's educational efforts through a robust series of **seminars, symposia, and short courses**, offered in collaboration with Columbia's professional schools and research centers (e.g., health policy experts at the Mailman School of Public Health and in Columbia's Business School supporting dialog around insurance uptake and reimbursement for cell and gene therapies). These events will serve to disseminate the latest advances in cell engineering, foster interdisciplinary collaboration, and position Columbia as a convening center for thought leadership in the field.

In alignment with its mission, CICET's educational programming will emphasize **equitable access** and foster outreach initiatives to local and global partners to disseminate knowledge and foster an inclusive workforce in cell and gene therapy.

Columbia Institute for Cell Engineering and Therapy Leadership

Dr. Michel Sadelain, the inaugural Director of CICET, will report to the Executive Vice President for Health and Biomedical Sciences regarding administrative and financial matters. Additionally, he will serve as an advisor to the university and Columbia University Irving Medical Center (CUIMC) leadership on the strategic vision for cell and gene therapies.

Future directors of CICET will be selected through a national search conducted by a search committee, following existing Columbia University and VP&S policies. The Executive Vice President for Health and Biomedical Sciences/Dean of VP&S will establish this search committee and appoint its chair. If the CICET Director takes a sabbatical or leave of absence, the Executive Vice President for Health and Biomedical Sciences/Dean of VP&S will appoint an interim Director.

CICET will be overseen by two governance committees: the University-Wide Committee and the Executive Steering Committee (**Table 1**).

Columbia's Initiative in Cell Engineering and Therapy

Table 1. Columbia University Governance Committees

Committee	Main Functions	Membership Composition
University-Wide Committee	- Institutional communication guidance - Strategic guidance	- Established and led by the EVP - Members are listed in Appendix 1.
Executive Steering Committee	- Develop the overall strategy and the short- and long-term goals to achieve CICET's mission - Oversee CICET's overall development and growth opportunities - Establish CICET's internal governance committees	- Chaired by the CICET Director - Members are listed in Appendix 2.

The planned CICET's internal governance committees, of which the CICET Director will be either the co-chair or chair, are listed in **Table 2.**

Table 2. CICET Internal Governance Committees

Committee	Main Functions	Membership Composition
General Steering Committee	- Propose strategies and initiatives for CICET's development and growth to the CICET Director and the Executive Steering Committee. - Promotes CICET's initiatives to concerned departments and centers	- Department Chairs - CU School leaders - CTV
Cell Therapy Translational Council	- Review and oversee basic and translational programs that fuel the Discovery Engine - Review, endorse, and oversee pipeline programs	- Research Domain Experts - Select Members of the Clinical Trials Office, CTV
Clinical Innovation Advisory Council	- Review, endorse, and oversee clinical trial design and implementation - Review and approve clinical protocol proposals (intrinsic qualities and competitive landscape)	- Clinical Trials Office - Clinical Research Experts and Domain Leads

Host of the Columbia Institute for Cell Engineering and Therapy

The Vagelos College of Physicians and Surgeons (VP&S) will host CICET. While CICET will be administratively based at VP&S, in addition to the clinical and scientific research expertise in the basic and clinical departments at the medical school, Columbia's current faculty in A&S, SEAS, MPSH, and CBS have considerable academic and research strengths to contribute to the Institute's overarching mission.

Columbia Institute for Cell Engineering and Therapy's Structure and Membership

CICET will be established on **three integrated pillars** that work together to drive its mission: (1) a **distinguished body of faculty** that serve the three arms of the VP&S mission – research, teaching, and clinical care; (2) dedicated research laboratories that serve as the **Discovery Engine**; and (3) the **Cell Therapy Development Engine**, which

Columbia's Initiative in Cell Engineering and Therapy

includes cell and vector manufacturing, clinical operations and regulatory affairs. Collectively, these interconnected entities will establish a seamless continuum between discovery, development, and clinical translation—advancing CICET's goal of bringing curative cell-based therapies from bench to bedside.

The CICET Faculty will pursue high-impact, interdisciplinary research across a range of domains—including cell-based immunotherapies, stem cell biology, regenerative medicine, transplantation, neuroscience, genetic engineering, bioengineering, cell manufacturing, synthetic biology, systems biology, artificial intelligence, policy research, and product commercialization and pricing. Their collective work will contribute to CICET's overarching goal: to develop curative therapies and make cell and gene therapies more accessible.

To achieve its academic and scientific vision, CICET will recruit and support a **CICET Faculty** composed of researchers involved in foundational research in cellular engineering who will play a key role in the Institute's academic programming and research activities. Since his arrival, Dr. Sadelain has recruited two laboratory-based CICET Faculty members and has the resources to hire a total of eight in the coming years. CICET will provide administrative and program management support, as well as laboratory space, for these Faculty. These Faculty members may have appointments in any one of several departments, but will be administratively 100% within the Institute. Additionally, in partnership with departments across the university, CICET may contribute to the recruitment of faculty with research aligned with cell engineering and gene therapy research. Departmental affiliation and laboratory location will be decided as programmatically appropriate. Importantly, these Faculty members, regardless of their location or department affiliation, will have access to CICET core resources, pilot funding opportunities, and participate in their academic activities.

As part of advocating and advancing CICET's mission, the Faculty is expected to:

- Contribute to grant applications focused on cell engineering and gene therapy
- Speak at and attend the CICET seminar series
- Participate in reviewing CICET pilot award applications and contribute to CICET's educational programming
- For collaborative projects that benefit from CICET infrastructure, the Faculty is expected to allocate a portion of indirect costs to help sustain the Institute's core facilities and administrative functions
- In their capacity as domain leaders, the Faculty will be responsible for representing CICET in related institutional initiatives and providing updated reports
- CICET Faculty may also be requested to assume leadership roles within CICET's infrastructure and governance framework

Columbia University faculty may be invited to join CICET or may request consideration by contacting the Director of the Institute. Faculty seeking membership will be required to submit a statement outlining their current or proposed research aligned with cell and gene engineering and cell therapy. Applications will be reviewed based on relevance to CICET's mission and the potential for meaningful contribution to the Institute's interdisciplinary activities. Approximately 60 Columbia faculty members are currently identified as prospective CICET Faculty members (**Appendix 3**), who are anticipated to be formally recognized upon the Institute's official designation. Membership is expected to grow in the coming year as CICET expands its research, educational, and translational activities and gains broader visibility across the Manhattanville, Morningside Heights, and CUIMC campuses.

Columbia's Initiative in Cell Engineering and Therapy

Columbia Institute for Cell Engineering and Therapy Space

CICET will be headquartered in the **Vagelos Innovation Laboratories Building**, which will accommodate the Institute's cGMP administrative offices (1,200 square feet) and eight (8) research laboratories, promoting interdisciplinary collaboration in a purpose-built space for advanced biomedical research. The **CICET cGMP Facility**, located on the first floor of the Russ Berrie Medical Science Pavilion, is on track to become operational by the fall of 2025 and will serve as a central hub for clinical-grade manufacturing.

Columbia Institute for Cell Engineering and Therapy Key Functions

CICET is designed to serve as a comprehensive hub for translational research and education in cell and gene therapy. As an Institute, CICET will integrate discovery science, clinical translation, manufacturing infrastructure, and educational programming under one unified mission. Its goals are structured to support long-term impact across research, education, patient care, and equitable access.

CICET will promote collaborative programs that span basic science, translational development, cGMP manufacturing, and clinical implementation. Key priorities include:

- Recruit interdisciplinary faculty to support biological, engineering, and clinical goals
- Develop and manage pipeline programs with technical and logistical support for IND-enabling studies, including Chemistry, Manufacturing, and Controls (CMC) and Pharmacology and Toxicology workstreams
- Operate a dedicated GMP facility for Phase 1/2 clinical manufacturing, with plans to expand toward Phase 3 and commercial readiness
- Enable translational studies to generate product insights and inform clinical development
- Support investigator-initiated and industry-sponsored clinical trials, in collaboration with CUIMC and NYP
- Provide sponsored research agreement, licensing, and commercialization support in partnership with Columbia Technology Ventures (CTV), Clinical Trials Office (CTO), and Sponsored Programs Administration (SPA)
- Develop a robust educational programming to cultivate the next generation of leaders in cell and gene therapy that spans students to postdoctoral trainees and early career researchers

To foster innovation and early-stage development, CICET will launch a **pilot grant program** that provides:

- Funding for preclinical and IND-enabling research
- Seed funding for first-in-human Phase 1 trials led by Columbia investigators
- Early de-risking of novel therapeutic concepts across the cell and gene therapy pipeline

Through a dedicated **Thinktank**, the Institute will:

- Convene academic stakeholders (experts in biology, medicine, bioengineering, business, regulatory affairs, and public health) to develop a strategy for long-term sustainability in cell therapy development
- Work with Columbia scholars in health policy, law, and business development to develop new models to ensure equitable access to novel therapies across patient populations
- Align commercialization, manufacturing, and access strategies with Columbia's public mission

Together, these overall functions of CICET will bridge the gap between basic science and clinical care and consolidate Columbia's sustainable leadership in the field of cell and gene therapy.

Columbia's Initiative in Cell Engineering and Therapy

Columbia Institute for Cell Engineering and Therapy Budget

CICET has start-up funding from philanthropic sources, most significantly the Vagelos Cell Engineering and Therapy Fund. Cell and gene engineering and therapies are a priority of the VP&S research and clinical mission. CICET has additional startup funding from the VP&S departmental sources and our hospital partner, NewYork-Presbyterian. With capital and operational philanthropic commitments from Dr. Roy P. Vagelos and Diana Vagelos, CICET will play a vital role in the ongoing scientific plans for the Vagelos Institute for Basic Biomedical Sciences and in future initiatives aimed at strengthening our clinical and translational research. CICET and the Chan-Zuckerberg NY BioHub are also forging a partnership on T cell engineering that will support future scientific recruitments. Ongoing operational funds will be from a mix of extramural grants, company-sponsored research agreements, clinical trial agreements, licensing agreements, foundations, and ongoing philanthropic investments. (see attached financial report).

Letter of Support from Executive Vice-President of Columbia University Irving Medical Center

Submitted separately

Columbia's Initiative in Cell Engineering and Therapy

Appendix 1: University-Wide Committee

Chair: Executive Vice President, Health and Biomedical Sciences

ex officio: TBN

Core Members:

1. Director, CICET
2. Dean of Science, School of Arts and Sciences
3. Dean of the Fu Foundation School of Engineering and Applied Science
4. Dean, Columbia School of Business

Columbia's Initiative in Cell Engineering and Therapy

Appendix 2: Proposed Executive Steering Committee

Chair: Director, CICET

ex officio: Associate Director, Strategy & Programs, CICET

Core Members:

1. TBN VP Strategic Development
2. Chair of Pediatrics or delegate
3. Chair of Medicine or delegate
4. Herbert Irving Cancer Center Director or delegate
5. Group SVP, Chief Information and Transformation Officer, NYP
6. TBN, School of Arts and Sciences
7. TBN, School of Engineering and Applied Sciences

Columbia's Initiative in Cell Engineering and Therapy

Appendix 3: CICET Faculty

Faculty	Title	Department
Sascha Haubner, MD	Assistant Professor of Medicine	Department of Medical Hematology & Oncology
Max Mamonkin, PhD	Associate Professor of Pediatric Immunology	Departments of Pediatrics
Erbil Abaci, PhD	Assistant Professor at the Department of Dermatology and the Department of Biomedical Engineering	Department of Dermatology
Treena Arinze, PhD	Professor of Biomedical Engineering	Department of Biomedical Engineering
Anca Askanase, MD	Professor of Medicine	Department of Medicine, Rheumatology
Elham Azizi, PhD	Herbert & Florence Irving Assistant Professor of Cancer Data Research, Irving Institute for Cancer Dynamics, Assistant Professor of Biomedical Engineering, Affiliated Faculty of Computer Science, Affiliated Member of Data Science Institute	Department of Biomedical Engineering
Monica Bhatia, MD	Michael Weiner, M.D. Professor of Pediatrics	Department of Pediatrics BMT
Amar Bhide, DBA, MBA	Professor of Health Policy and Management	Department of Health Policy and Management
Dusan Bogunovic, PhD	Professor of Pediatric Immunology (in Pediatrics)	Department of Pediatrics
Andrea Califano, PhD	Clyde '56 and Helen Wu Professor of Chemical Biology; Professor of Biomedical Informatics and Biochemistry and Molecular Biophysics; Professor of Medicine in the Institute for Cancer Genetics; Chair, Department of Systems Biology	Chan Zuckerberg Biohub Network
Ke Cheng, PhD	Alan L. Kaganov Professor of Biomedical Engineering	Department of Biomedical Engineering
Alberto Ciccia, PhD	Associate Professor of Genetics and Development	Department of Genetics and Development
Virginia Cornish, PhD	Helena Rubinstein Professor of Chemistry (in Systems Biology)	Department of Chemistry
Tal Danino, PhD	Associate Professor of Biomedical Engineering	Department of Biomedical Engineering



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Faculty	Title	Department
Dietrich Egli, PhD	Associate Professor of Developmental Cell Biology (in Pediatrics and Obstetrics and Gynecology)	Department of Pediatrics, Molecular Genetics
Ali Gharavi, MD	Harold Ames Hatch (II) Professor of Medicine; Chair of the Department of Medicine	Department of Medicine, Nephrology
Sankar Ghosh, PhD	Silverstein and Hutt Family Professor of Microbiology; Chair, Department of Microbiology and Immunology	Department of Microbiology & Immunology
Eldad Hod, MD	Professor of Pathology and Cell Biology	Department of Pathology & Cell Biology
Chin Hur, MD	Herbert and Florence Irving Professor of Medicine to Honor Dr. Jeffrey Alan Stein and Professor of Epidemiology	Department of Medical Digestive & Liver Disease
Clark Hung, PhD	Professor of Biomedical Engineering and Orthopedic Sciences (in Orthopedic Surgery)	Department of Biomedical Engineering
Benjamin Izar, MD, PhD	Associate Professor of Medicine and Systems Biology	Department of Medical Hematology & Oncology
Philip De Jager, MD, PhD	Weil-Granat Professor of Neurology	Department of Neurology
Lance C. Kam, PhD, MS	Professor of Biomedical Engineering and Medical Sciences (in Medicine)	Department of Biomedical Engineering
Stavroula Kousteni, PhD	Professor of Physiology and Cellular Biophysics	Herbert Irving Comprehensive Cancer Center
Andy Lassman, MD	John Harris Professor of Neurology at the Columbia University Medical Center; Associate Dean of Clinical Trials at VP&S	Department of Neurology
Suzanne Lentzsch, MD, PhD	Professor of Medicine	Department of Medical Hematology & Oncology



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Faculty	Title	Department
Kam W. Leong, PhD	Samuel Y. Sheng Professor of Biomedical Engineering (in Systems Biology)	Department of Biomedical Engineering
Costis Maglaras, PhD	Dean of Columbia Business School David and Lyn Silfen Professor of Business	Columbia Business School
Markus Mapara, MD	Professor of Medicine	Department of Medical Hematology & Oncology
José McFaline-Figueroa, PhD	Assistant Professor of Biomedical Engineering	Department of Biomedical Engineering
Joshua Milner, MD	Professor of Pediatrics	Department of Pediatrics, Allergy
Adam Mor, MD, PhD	Herbert and Florence Irving Associate Professor of Rheumatology (in Medicine) to Honor Dr. Ralph Blume	Department of Medicine, Rheumatology
Pawel Muranski, MD	Assistant Professor of Medicine	Department of Medical Hematology & Oncology
Emmanuelle Passegué, PhD	Alumni Professor of Genetics and Development (in Rehabilitation and Regenerative Medicine); Director, Columbia Stem Cell Initiative	Department of Genetics & Development
Aimee Payne, MD, PhD	Herbert and Florence Irving Professor of Dermatology, Department Chair of Dermatology	Department of Dermatology
Barbara Pro, MD	Professor of Medicine	Department of Medical Hematology & Oncology
Muredach Reilly, MD	Florence and Herbert Irving Endowed Professor of Medicine; Director, Irving Institute for Clinical and Translational Research; Associate Dean for Clinical and Translational Research	Department of Medicine Cardiology
Ran Reshef, MD, MSc	Professor of Medicine	Departments of Medical Hematology & Oncology
Claire Riley, MD	Karen L.K. Miller Associate Professor of Neurology	Department of Neurology
Anil Rustgi, MD	Herbert and Florence Irving Professor of Medicine; Herbert and Florence Irving Director, Herbert Irving Comprehensive Cancer Center; Associate Dean of	Department of Medical Digestive & Liver Disease



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Faculty	Title	Department
	Oncology; Special Advisor, Cancer Programs and Strategies	
Prakash Satwani, MD	James A. Wolff Professor of Pediatrics	Department of Pediatrics BMT
Liora Schultz, MD	Pediatric Oncologist	Department of Pediatrics BMT
Michael Shen, PhD	Arthur J. Antenucci Professor of Medical Sciences (in Medicine), Genetics and Development, and Urological Sciences (in Urology)	Department of Medical Hematology & Oncology
Neil Shneider, MD, PhD	Claire Tow Associate Professor of Neurology	Department of Neurology
Sam Sia, PhD	Vice Provost for the Fourth Purpose and Strategic Impact; Professor of Biomedical Engineering	Department of Biomedical Engineering
Lewis Silverman, MD	Professor of Pediatrics at the Columbia University Medical Center	Department of Pediatrics Oncology
Peter Sims, PhD	Associate Professor of Systems Biology and Biochemistry and Molecular Biophysics	Department of Systems Biology
Hans-Willem Snoeck, MD, PhD	Byron M Thomashow Professor of Medicine	Department of Medicine, Pulmonary
Mark Stein, MD	Associate Professor of Medical Oncology	Dept of Medical Hematology & Oncology
Sam Sternberg, PhD	Associate Professor of Biochemistry and Molecular Biophysics	Department of Biochemistry and Molecular Biophysics
Brent Stockwell, PhD	William R Kenan Professor of Biological Sciences; Professor of Chemistry and Pathology and Cell Biology; Chair of the Department of Biological Sciences	Department of Biology
Megan Sykes, MD	Michael J. Friedlander, Professor of Medicine and Professor of Microbiology and Immunology, and Surgical Sciences	Department of Medical Hematology & Oncology
Stephen Tsang, MD, PhD	Laszlo Z. Bito Professor of Ophthalmology and Professor of Pathology and Cell Biology	Department of Ophthalmology

Columbia's Initiative in Cell Engineering and Therapy

Faculty	Title	Department
Sjoukje van der Stegen, PhD	Immune Cell Engineering Platform Leader	Chan Zuckerberg Biohub Network
Aaron Viny, MD	Assistant Professor of Medicine	Department of Medical Hematology & Oncology
Gordana Vunjak-Novakovic, PhD, MS	University Professor and Mikati Foundation Professor of Biomedical Engineering	Department of Biomedical Engineering
Timothy Wang, MD	Dorothy L. and Daniel H. Silberberg Professor of Medicine	Department of Medical Digestive & Liver Disease
Harris Wang, PhD	Associate Professor of Systems Biology, of Pathology and Cell Biology and of Biomedical Engineering	Department of Systems Biology
Sarah Wesley, MD, MPH	Assistant Professor of Neurology	Department of Neurology

University Senate

Proposed: October 24, 2025

Adopted: October 24, 2025

65-0-9: In favor-Opposed-Abstained

**RESOLUTION TO APPROVE AN ACADEMIC PROGRAM LEADING TO THE
MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE
(School of Engineering and Applied Science)**

WHEREAS the rapid advancement of AI has created unprecedented demands both in industry for talented graduates with AI foundational skills and from students who have registered their interest through over-enrollment in courses in artificial intelligence; and

WHEREAS this program would leverage Columbia’s excellence across schools to offer interdisciplinary concentrations and breadth across application domains; and

WHEREAS the Fu Foundation School of Engineering and Applied Science has proposed this program to combine core classes in the Engineering School with concentrations from across the University; and

WHEREAS the program would require 48 weeks of full-time study and the completion of 30 credits, with an identical program offered fully online; and

WHEREAS the program would expect to enroll 150 students per year when it reaches steady state, and it expects to require no new hiring of full-time faculty members and no creation of courses beyond those already offered; and

WHEREAS the University Senate Education Committee has favorably reviewed the program;

THEREFORE BE IT RESOLVED that the University Senate approve the establishment of the Master of Science in Artificial Intelligence, and

BE IT FURTHER RESOLVED that the University Senate Education Committee will review the program five years after its launch.

Proponent: Education Committee



**Proposal for New Degree, New Degree from Existing Track, New Certificate, or
New Certification of Professional Achievement (CPA) Program**

Please insert the requested information in the table below:

Degree:	Master of Science
Program Name:	Artificial Intelligence
If this program is currently a track in an existing program but has evolved as a stand-alone program, please indicate the program it's based on:	
Sponsoring School(s):	The Fu Foundation School of Engineering and Applied Science
Proposed Start Date:	Fall 2026 semester
Name and Email Address of the Primary Contact Person for this Proposal:	Vishal Misra (vishal.misra@columbia.edu) Professor of Computer Science Vice Dean of Artificial Intelligence of Columbia Engineering Garud Iyengar (gi10@columbia.edu) Professor of Industrial Engineering and Operations Research Avanessians Director of the Data Science Institute
Date of Proposal Submission:	September 17, 2025

Description of Proposed Program

Please complete the questions below and submit this document and the external reviewer list (if applicable) through the APAS system (<https://apas.provost.columbia.edu/>) to begin the review process. *Please note: Firefox is the recommended browser for APAS; functionality may be less optimal when using Internet Explorer or Chrome.*

1) Purpose

A) Describe in 1-2 paragraphs the purpose of the proposed program, its target audience, its content, and its format/pedagogical approaches.

With the prevalence of artificial intelligence (AI) across society and its rapid advancement, there are unprecedented demands for talented graduates trained with solid AI foundational skills as well as novel applications in specific domains. The academic discipline of AI is anchored in Computer Science and Engineering. Top scholarly publications of AI are typically published in the venues of machine learning, natural language processing (NLP), computer vision (CV), robotics, and AI systems, fields that are centered within Computer Science and Engineering.

Many peer institutions have launched new MS programs in AI, with curricula offered by Engineering Schools and/or Computer Science departments (see review section). In order to leverage Columbia's strength in the foundations of AI and expertise in a broad range of disciplines, we propose a new Master of Science in Artificial Intelligence (MSAI) program that combines core AI courses in Computer Science and Engineering with a comprehensive array of concentrations to provide students with specialized domain-specific training. These specialized concentrations are designed to leverage our unique excellence in related fields in Engineering, such as robotics, operations/finance, biomedical engineering, infrastructure/hardware, and in various academic disciplines across the university, such as policy, health and medicine, business, social science, climate, and arts/media.

The curriculum of the concentrations will be jointly planned by faculty at Columbia Engineering and partner schools from across the University. Students completing the program will be awarded an MS in Artificial Intelligence degree, and they will receive an annotation of the specific concentration (e.g., policy, robotics, etc) on their transcript/diploma.

The proposed MSAI would stand apart from existing programs by providing a unified, rigorous AI curriculum anchored in Computer Science and Engineering, *plus* formalized pathways to apply AI in various fields, including the option of a two semester capstone project with didactic and research components (see details in the curriculum section). As in other capstone programs, strong engagement from industry partners is expected to ensure that projects address real-world challenges.

The proposed MSAI fills a gap between pure technical degrees (CS, Data Science) and domain programs (health/medicine, policy, business) – creating a comprehensive AI education hub at the University. Columbia's extensive AI research presence (70+ full-time faculty members, 10+ large research centers) in SEAS working on AI across departments and collaborations with other schools means the resources are in place to support this interdisciplinary degree.

B) How does the new program relate to ongoing programs? Will it replace any existing program(s)? Does the proposed program completely or partially duplicate (an) existing program(s) in any other unit of the University?

Within Columbia University, no current program offers the exact scope of the proposed MS in Artificial Intelligence, though several existing degrees cover a number of the disciplines. Columbia's MSAI would stand apart from existing programs by providing a unified, rigorous AI

curriculum anchored in Computer Science and Engineering, *plus* formalized pathways to apply AI in various fields. It fills a gap between pure technical degrees (CS, Data Science, Stats) and domain programs (health and medicine, policy, business) – creating a comprehensive AI education hub at the University. Columbia’s extensive AI research presence (70+ full-time faculty members) in SEAS working on AI across departments and collaborations with other schools means the resources are in place to support this interdisciplinary degree.

MS in Computer Science in SEAS

The MS in Computer Science (MSCS) program in SEAS is a 30-point program offering tracks like Machine Learning, Computer Vision, Natural Language Processing, etc. Students in those tracks take AI-related courses (e.g., COMS W4771 Machine Learning, vision/NLP electives).

Difference: The MSCS is confined to Computer Science coursework, without the formal interdisciplinary structure. A CS student can specialize in AI, but they won’t have a built-in option to concentrate in cross-department or cross-school domains like operations/finance, robotics/embodied AI, policy, or health as part of their degree. Additionally, AI ethics/security and cross-disciplinary electives are not part of the standard MSCS curriculum. The proposed MS-AI would be a distinct degree “anchored in Computer Science” but integrating courses from other departments and schools, which is not the case for the existing MSCS.

AI Certificate in SEAS

SEAS currently has an online certificate program in AI, including 6 online courses and 1 in-person immersion over 18 months. They are taught by SEAS faculty in Computer Science, Electrical Engineering, and Mechanical Engineering.

- Intro to AI and Business for AI
- Algorithms and Machine Learning
- Neural Networks and Deep Learning
- Natural Language Processing and Speech
- Computer Vision and Robotics
- Data Privacy, Security, and Policy

MS in Data Science (SEAS/GSAS)

The Master of Science in Data Science (MSDS) program provides a foundation in machine learning, statistics, optimization, algorithms, and data visualization, plus a capstone. The MSDS curriculum has a unique combination of courses from CS, IEOR, and Statistics. The degree, admissions, and student service components are managed by SEAS. Both MSAI and MSDS are interdisciplinary, where the MSDS draws faculty from Computer Science, Statistics, and Industrial Engineering and Operations Research, and includes an ethics component in its capstone.

Differences: *Focus*: Data Science centers on data analysis, statistical modeling, optimization, and “big data” techniques, preparing students to glean insights from data (with courses in stats, data management, etc.). The MSAI program, built on recent machine learning techniques centered around deep learning and large language models, is broader in *AI algorithms and decision-making*, including areas like robotics, perception, and AI-driven agent systems (including both software and hardware) that go beyond data analysis. *Curriculum structure*: The MSAI requires core AI courses (AI, ML with deep learning, NLP, vision/robotics, ethics/privacy/security) and then *domain-focused* courses in a concentration, which is a different structure than Data Science’s more generalized core + electives. We expect MSAI and MSDS

both to thrive concurrently, addressing the needs of industries requiring strong data analytics skills (MSDS) vs. AI foundation training with domain-specific applications (MSAI). Several peer institutions, as reviewed below, offer both MSAI and MSDS.

MA in Statistics – Advanced Machine Learning Track (Department of Statistics)

The MA in Statistics with an Advanced Machine Learning track, offered by Columbia's Department of Statistics, provides rigorous training in modern statistical theory and applied machine learning. The curriculum emphasizes the mathematical and inferential foundations of learning algorithms - covering probability theory, linear models, statistical and causal inference, and high-dimensional data analysis - while introducing core applied ML techniques such as supervised and unsupervised learning, deep learning, and Bayesian modeling. Students take courses such as STAT GR5206 Statistical Computing and Introduction to Data Science, STAT GR5241 Machine Learning for Data Science, and STAT GR5262 Statistical Machine Learning, along with electives in optimization, probabilistic modeling, and data visualization.

Difference: The MA in Statistics (Advanced Machine Learning track) focuses on the theoretical and data-driven aspects of statistical learning, preparing students to design and analyze models with statistical rigor. It is rooted in Statistics, emphasizing model interpretability and inference rather than large-scale AI systems, generative AI, language models, robotics, or perception. By contrast, the proposed MS in Artificial Intelligence is anchored in Computer Science and Engineering, encompassing advanced deep learning, Natural Language Processing, computer vision, embodied AI, multimodal reasoning, and AI security/fairness/ethics, along with formalized interdisciplinary concentrations across policy, health, robotics, and infrastructure. The two programs are complementary in scope - one emphasizing statistical learning foundations and the other emphasizing AI core foundation as well as robotics, AI systems and applications. We are also in active discussions with the Department of Statistics to offer a formal Statistical Foundations of AI concentration within the MS in AI program, allowing students to explore in-depth training of rigorous statistical modeling along with core foundation and advanced techniques of AI.

Other SEAS MS Programs

Several MS programs in SEAS have artificial intelligence as part of their curriculum, including:

MS in Electrical Engineering and MS in Computer Engineering

The Electrical Engineering Department offers courses in neural networks, signal processing, and "Mathematics of Deep Learning" as part of its elective offerings for the MS in Electrical Engineering and MS in Computer Engineering programs. The two MS degrees are broader (communications, hardware, etc.), and students specialize in a subset of Electrical Engineering; they do not provide a unified AI-focused curriculum.

MS in Business Analytics and MS in Financial Engineering

The Industrial Engineering and Operations Research Department (IEOR) offers an MS in Business Analytics (in collaboration with Columbia Business School) and an MS in Financial Engineering. These include machine learning and optimization courses (e.g., IEOR E4525 Machine Learning for OR/FE) that overlap with AI techniques. However, the goal is to apply analytics in business/finance contexts,

whereas MSAI would offer a wider range of application domains (not just finance or business) and a deeper core in AI fundamentals beyond predictive analytics.

MS in Mechanical Engineering

The Mechanical Engineering Department offers an MS in Mechanical Engineering with a concentration in Robotics and Control. It does not offer a standalone master's in Robotics or AI, but it has several faculty leading robotics research and courses like Robotics Studio or Advanced Robotic Manipulation (which could be used to form a strong AI concentration). The proposed MSAI would formally incorporate such courses under a Robotics and Perception concentration, attracting those who want an AI-focused engineering degree.

MS in Biomedical Engineering

The Biomedical Engineering Department offers graduate electives in biomedical data science and AI (e.g., deep learning for biomedical imaging, machine learning for genomics). The proposed MSAI would formally incorporate such courses under a Biomedical AI concentration, allowing students to focus purely on AI techniques applied to biomedicine, filling a niche for those who want to be AI specialists in biomedical systems and applications.

2) Need

A) Why is the proposed program needed locally, statewide, or nationally?

Many leading universities have launched specialized AI master's degrees or related tracks, reflecting the growing demand for AI expertise from industry. These MSAI programs are offered by schools of Engineering and/or Computer Science with a strong focus on the technical foundation of AI. Columbia's proposed MSAI shares some features with these programs but also has distinct differences. Yet, Columbia's proposed program is timely and competitive: many peers are formalizing AI education, but Columbia's plan to fuse a core AI foundation with interdisciplinary concentrations across departments and schools (Engineering and beyond) is unique. It combines the depth of a technical AI curriculum with breadth across broad application domains, whereas other programs often emphasize either technical depth or a particular applied context.

Some notable examples of existing MSAI programs are:

University	School offering the Degree	Degree Name
University of Pennsylvania	School of Engineering and Applied Science	Master of Science in Engineering in Artificial Intelligence (MSE-AI)
Carnegie Mellon University	School of Computer Science	Master of Science in Artificial Intelligence and Innovation (MSAI)
Carnegie Mellon University	College of Engineering	Master of Science in Artificial Intelligence Engineering (MSAIE)
Northwestern University	McCormick School of	Master of Science in Artificial

	Engineering	Intelligence (MSAI)
University of Texas at Austin	Department of Computer Science	Master of Science in Artificial Intelligence (MSAI)
Johns Hopkins University	Whiting School of Engineering	Master of Science in Artificial Intelligence (MSAI)
Northeastern University	College of Engineering and College of Computer Science	Master of Science in Artificial Intelligence (MSAI)

B) Have students at the University or elsewhere requested this program? How many?

It is very clear to us that the global demand for this program is extraordinarily high. Columbia University does not have a program currently, but we observe an over-enrollment and very high demand for courses in and related to artificial intelligence. Since the courses for this degree have been offered and are currently being offered, we have tracked demand for some time. The demand for these courses in AI is very high and growing. Examples of such courses include:

COMS W4701 Artificial Intelligence
COMS W4705 Natural Language Processing
COMS W4771 Machine Learning
IEOR E4525 Machine Learning for Operations Research and Financial Engineering
ELEN 4720 Machine Learning for Signals, Information, and Data
COMS 4721 Machine Learning for Data Science

In addition, we offer an Artificial Intelligence and Machine Learning concentration as part of our MS program in the dual degree program with Columbia Business School (MBAxMS). This concentration is the most popular in the cohort, with over 75% of the class electing this option.

C) If the program is professionally oriented, have persons in the profession requested the establishment of the program? How have the employment needs of professionals in the field been taken into account when designing the program?

We are observing an explosive demand for talent skilled in artificial intelligence, and a persistent shortage of such talent. According to the Saras AI Institute, the global AI market is projected to reach \$407B by 2027. LinkedIn, Indeed, and Burning Glass/Lightcast all rank AI/ML engineer, applied scientist, and data scientist (AI focus) among the top 5 fastest-growing job categories nationwide. The World Economic Forum (2023) projected that 97 million new AI-related roles will be created worldwide by 2030, underscoring both US demand and the global pull for talent trained in premier hubs like Columbia University.

Columbia is uniquely positioned in New York City, home to finance, healthcare, media, law, and policy organizations that are early and heavy adopters of AI. Columbia's program directly prepares graduates for these NYC-based industry clusters, making the location itself a strategic advantage. We are seeing the following industries drive AI hiring in the New York City area:

Finance and FinTech: JPMorgan, Goldman Sachs, Two Sigma, and countless startups hiring for algorithmic trading, fraud detection, and risk analytics.

Healthcare and Biomedicine: Mount Sinai, NYP, and biotech firms deploying AI for imaging, genomics, and personalized medicine.

Media and Creative Industries: Warner Bros. Discovery, NBC, and the New York Times is experimenting with generative AI in storytelling and content.

Public Policy and Law: United Nations, New York City government, and law firms grappling with AI regulation and governance.

Employers are seeking technical skills with blended competencies, including technical depth, domain fluency, ethics/security and governance, and applied project experience. The proposed Columbia MSAI program is created to deliver what the industry needs and ensure that graduates will fill the urgent domestic and NYC talent gap and also become leaders at the intersection of AI and society, equipped for both today's jobs and tomorrow's emerging roles.

Technical depth: Employers seek mastery in machine learning, deep learning, natural language processing, computer vision, cloud computing infrastructure, and robotics. This is obtained through the rigorous artificial intelligence core courses in Computer Science and Engineering.

Domain fluency: Employers seek candidates with the ability to apply AI in verticals (finance, health, policy, media). Our defined concentrations allow students to specialize in a domain, such as finance and operations, AI infrastructure, robotics, health, business, policy, climate, which are aligned with New York-centric industries.

Ethics, security, and governance: Employers seek candidates who understand bias, fairness, security, and regulatory compliance. Our defined curriculum includes coursework and hands-on experience in ethics, security, and governance.

Applied project experience: Employers seek candidates with deployable skills in the market. Our proposed curriculum includes a two-semester capstone experience with interdisciplinary mentorship to build real-world, practical problem-solving experience. The capstone experience includes both a formal didactic component and an independent research component. As in other capstone programs, strong engagement from industry partners is expected to ensure that projects address real-world challenges.

D) What other institutions in the New York metropolitan area and in the Northeast offer similar programs?

Some notable examples of existing MSAI programs in the region are:

University	School offering the Degree	Degree Name
University of Pennsylvania	School of Engineering and Applied Science	Master of Science in Engineering in Artificial

		Intelligence (MSE-AI)
Carnegie Mellon University	School of Computer Science	Master of Science in Artificial Intelligence and Innovation (MSAI)
Carnegie Mellon University	College of Engineering	Master of Science in Artificial Intelligence Engineering (MSAIE)
Johns Hopkins University	Whiting School of Engineering	Master of Science in Artificial Intelligence (MSAI)
Northwestern University	McCormick School of Engineering	Master's of Artificial Intelligence
Northeastern University	College of Engineering and College of Computer Science	Master of Science in Artificial Intelligence (MSAI)
University of Texas at Austin	Department of Computer Science	Master of Science in Artificial Intelligence (MSAI)

3) Curriculum

A) Provide a brief summary of the program in the form of a one-paragraph catalogue or website description.

The Master of Science in Artificial Intelligence (MSAI) program at Columbia University is designed to attract highly motivated graduate students who wish to broaden their knowledge and skills in AI and related technologies. The program will educate students in both the fundamentals and the advanced, cutting-edge developments in artificial intelligence, including machine learning, deep learning, natural language processing, computer vision, AI infrastructure, and robotics. The MSAI program combines core AI courses in Computer Science and Engineering and a comprehensive array of concentrations with specialized training. These specialized concentrations are designed to leverage our unique excellence in related fields in Engineering, such as robotics, operations/finance, biomedical engineering, infrastructure, hardware, UI/UX, or in various academic disciplines across Columbia University, such as policy, business, health, social science, climate, or arts/media. This program will immerse students in the diverse and dynamic research and learning culture of a leading educational institution and connect them with broad industry partners, including the opportunity for a two-semester, applied project capstone experience.

B) Indicate the minimum total number of credits (or clock hours, as appropriate) required for completion of the program, as well as any other program requirements (e.g., final paper, field placement, capstone project). For Bachelor's programs, please indicate both the total number of credits required for graduation (e.g., 124 or 128), as well as the minimum number of credits within the major or concentration. Also note that the minimum number of credits is 30 for Master's programs, 20-24 for Certificate programs, and 12 for Certification of Professional Achievement (CPA) programs.

Degree Structure: 30 Credits Total, consists of:

1. Complete the Core AI Foundation (4 courses, 12 points)
2. Select 1 concentration (4 courses, 12 credits)
3. Complete electives and/or capstone (2 courses, 6 credits), where the electives are selected from a list of curated courses. Students who select the 6-credit 2-semester capstone project will be supervised by a faculty mentor. The goal of the capstone project is to integrate foundational skills learned in core courses and specialized courses in a concentration to solve complex problems.
4. Students interested in AI innovation and entrepreneurship are encouraged to take courses related to entrepreneurship from the elective pool.

The capstone project consists of two integrated components: a formal didactic component and an independent research component. The didactic component, led by an Engineering faculty member with support from teaching assistants, spans two semesters and provides structured instruction in project management, team formation, and conflict resolution. Students also learn how to identify meaningful problems, review and assess existing solutions, develop and test new ideas, and quantitatively evaluate outcomes. In the second semester, the emphasis shifts to iterative improvement and rigorous evaluation of their proposed solutions.

The independent research component is conducted in close collaboration with one or more faculty advisors and builds directly on the principles introduced in the didactic portion. As in other capstone programs, strong engagement from industry partners is expected to ensure that projects address real-world challenges. Students in cross-school concentrations will work with both an Engineering faculty mentor and a faculty member from the partner school. Faculty across these collaborations stand to benefit from the research contributions generated through the capstone experience.

C) Please use the table below to list the required, elective, and selective coursework. “Selective” coursework consists of a list of courses from which a student must select a minimum number of credits (but need not take all courses on the list).

REQUIRED COURSES Minimum number of required credits = 12 credits (4 courses)	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether the course is fully, partially, or not at all online	# of Credits
COMS W4701	SEAS	Existing	Artificial Intelligence (Ansaf Salleb-Aouissi)	In-person	3
COMS W4771 or IEOR E4525 or ELEN 4720 or COMS 4721	SEAS	Existing	Machine Learning (Daniel Hsu) Or Machine Learning for OR & FE (Christian Kroer) Or Machine Learning For Signals, Information and Data (Dave Vallancourt) Or Machine Learning for Data Science (John Paisley)	In-person	3
COMS W4705 or COMS W4731 or COMS W4732	SEAS	Existing	Natural Language Processing (Daniel Bauer, John Hewitt) Computer Vision I or II (Carl Vondrick)	In-person	3
COMS W4710	SEAS	Existing	Ethical and Responsible Artificial Intelligence (Ansaf Salleb-Aouissi)	In-person	3

SELECTIVE COURSES		Course Number (indicate if course is NEW)		Indicate whether the course is fully, partially, or not at all online	# of Credits
Minimum number of selective credits = 12 credits (4 courses)	School		Course Title & Instructor		
AI Foundation Concentration:					
AI Foundation Concentration: Choose 4 courses: minimum 2 graduate-level AI-related courses from computer science and AI from the approved elective pool, and 2 elective AI-related non-CS courses in Engineering from the approved elective pool.					
Please refer to the elective list after the Concentration section.					
Engineering Concentrations (choose 4 courses in each concentration):					
Robotics & Perception Concentration					
Choose 4 courses					
COMS W4731	SEAS	Existing	Computer Vision I (Austin David Reiter)	In-person	3
COMS W4732	SEAS	Existing	Computer Vision II (Austin David Reiter)	In-person	3
COMS W4733	SEAS	Existing	Computational Aspect of Robotics (Yunzhu Li)	In-person	3
MECE E4602	SEAS	Existing	Intro to Robotics (Sunil Agrawal)	In-person	3
MECE 4611	SEAS	Existing	Robotics Studio (Hod Lipson)	In-person	3
MECE E6615	SEAS	Existing	Advanced Robotic Manipulation (Matei Ciocarlie)	In-person	3
MECE E6616	SEAS	Existing	Robot Learning (Matei Ciocarlie)	In-person	3
ELEN E6908	SEAS	Existing	Embedded AI (Xiaofan Jiang)	In-person	3
EECS E4764	SEAS	Existing	Artificial Intelligence of Things (Xiaofan Jiang)	In-person	3
EEME E6911	SEAS	Existing	Probabilistic Robotics (Ilija Hadzic)	In-person	3
AI in Finance & Operations Concentration					
Choose 4 courses					
IEOR E4742	SEAS	Existing	Deep Learning for OR & FE (Ali Hirsa)	In-person	3
IEOR E4418	SEAS	Existing	Transportation Analytics & Logistics (Adam Elmachtoub)	In-person	3
IEOR E4530	SEAS	Existing	AI & Games & Markets (Christian Kroer)	In-person	3
ORCS E4200	SEAS	Existing	Data-Driven Decision Modeling (Lily Xu)	In-person	3
IEOR E4650	SEAS	Existing	Business Analytics (Adam Elmachtoub)	In-person	3
IEOR E4737	SEAS	Existing	AI Applications in Finance (Ali Hirsa)	In-person	3
IEOR E4703	SEAS	Existing	Monte Carlo Simulation Methods (Ali Hirsa)	In-person	3
AI & Biomedical Concentration					
Choose 4 courses					
BMEN E4420	SEAS	Existing	Biomedical Signal Modeling (Paul Sajda)	In-person	3

BMEN E4460	SEAS	Existing	Deep Learning in Biomedical Imaging (Jia Guo)	In-person	3
BMEN E4470	SEAS	Existing	Deep Learning for Biomedical Signal and Sequence Analysis (Paul Sajda)	In-person	3
BMCS E4480	SEAS	Existing	Statistical Machine Learning for Genomics (Elham Azizi)	In-person	3
BMCS E4575	SEAS	Existing	High-Dimensional Statistics for Biomedical Data (Elham Azizi)	In-person	3
ECBM E4060	SEAS	Existing	Intro-Genomic Info Sci & Tech (Wei-Yi Cheng)	In-person	3
AI Infrastructure Concentration Choose 4 courses					
COMS E6424	SEAS	Existing	Hardware Security (Simha Sethumadhavan)	In-person	3
CSEE W4121	SEAS	Existing	Computer Systems for Data Science (Asaf Cidon)	In-person	3
CSEE W4868	SEAS	Existing	System-On-Chip Platforms (Luca Carloni)	In-person	3
EECS E4750	SEAS	Existing	Heterogeneous Computing for Signal and Data Processing (Zoran Kostic)	In-person	3
EECS E4764	SEAS	Existing	Artificial Intelligence of Things (Xiaofan Jiang)	In-person	3
ELEN E6772	SEAS	Existing	Machine Learning for Computer and Communication Networks (Anwar Ibrahim Walid)	In-person	3
ELEN E6908	SEAS	Existing	Embedded AI (Xiaofan Jiang)	In-person	3
EECS E6981	SEAS	Existing	Operating, Distributed, and Runtime System Optimization through AI/ML Techniques (Asaf Cidon)	In-person	3
EECS E6692	SEAS	Existing	Topics in Data-Driven Anal & Comp (Topic: Deep Learning On The Edge)	In-person	3
EECS E6894	SEAS	Existing	Topics in Information Processing (Topic: Data Center Processing)	In-person	3
AI & UI/UX Concentration Choose 4 courses					
COMS W4170	SEAS	Existing	User Interface Design (Steve Feiner)	In-person	3
COMS W4172	SEAS	Existing	3D User Interfaces & Augmented Reality (Steve Feiner)	In-person	3
COMS W4901	SEAS	Existing	AI and Storytelling (Lydia Chilton)	In-person	3
COMS W4995	SEAS	Existing	Topics In Computer Science (Topic: Data-Driven Design for Social Innovation) (Nakul Verma)	In-person	3
COMS W4995	SEAS	Existing	Topics In Computer Science (Topic: Introduction to Data Visualization) (Christian Swinehart)	In-person	3
COMS E6173	SEAS	Existing	Virtual Reality and Augmented Reality	In-person	3

			(Steve Feiner)		
COMS E6178	SEAS	Existing	Human–Computer Interaction (Brian Smith)	In-person	3
COMS E6998	SEAS	Existing	Topics In Computer Science (Topic: Design for Generative AI (Lydia Chilton)	In-person	3
COMS E6998	SEAS	Existing	Topics In Computer Science (Topic: Systems for Human–Data Interaction (Eugene Wu)	In-person	3
ENGI E4502	SEAS	Existing	Design of UI/UX for Connected Systems (Hugh Thomas)	In-person	3
IEME E4200	SEAS	Existing	Human-Centered Design and Innovation (Harry West)	In-person	3
Cross-School Concentrations (choose 12 points in each concentration):					
AI & Policy & Governance Concentration (SIPA)					
Choose 12 points from the list below					
TPIN IA7015	SIPA	Existing	Viral Videos, Generative AI, and Geopolitics of a Changing World (Erica Berenstein)	In-person	3
TPIN IA7006	SIPA	Existing	Digital Content Provenance: Path to Transparency and Authenticity in the Generative AI World	In-person	1.5
SIPA IA6152	SIPA	Existing	Democracy and Democratic Erosion in the AI Era (Tamar Mitts)	In-person	1.5
TPIN IA7012	SIPA	Existing	AI: A survey for Policy Makers	In-person	3
USRP IA7112	SIPA	Existing	Ethics, AI, and Urban Governance	In-person	1.5
CEEN IA7330	SIPA	Existing	Artificial Intelligence and Climate Change	In-person	1.5
DSPC IA7175	SIPA	Existing	Artificial Intelligence Institutions	In-person	3
ISDI IA7102	SIPA	Existing	Artificial Intelligence and Conflict Prevention	In-person	3
SIPA IA6670	SIPA	Existing	Artificial Intelligence in Public Policy	In-person	1.5
AI & Health & Medicine Concentration (VP&S/DBMI)					
Take the following three mandatory classes:					
BINF G4001	VP&S	Existing	Intro Comp Biomed & Health (Gamze Gursoy)	In-person	3
BINF G4011	VP&S	Existing	Acculturation to Med & Clin Info	In-person	3
BINF GU4008 003	VP&S	Existing	Special Topics in Biomedical Informatics (Topic: Advanced Machine Learning for Health and Medicine) (Shalmali Joshi)	In-person	3
Choose one course from:					
BINF G4003	VP&S	Existing	Methods III: Symbolic AI for Health Care	In-person	3

			(Chunhua Weng)		
BINF G4008 001	VP&S	Existing	Special Topics in Biomedical Informatics (Topic: Intelligent Decision Support History, Paradigms, Applications) (Noemie Elhadad)	In-person	3
BINF G4008 002	VP&S	Existing	Special Topics in Biomedical Informatics (Topic: Interrogating Ethics and Justice in Digital Health) (Noemie Elhadad)	In-person	3
BINF G4019	VP&S	Existing	Computational Epidemiology (Amelia Jean Averitt)	In-person	3
BINF G5001	VP&S	Existing	Data Science for Mobile Health	In-person	3
AI & Public Health Concentration (MSPH) Choose 4 courses, 12 points:					
BIST P8105	MSPH	Existing	Data Science I (Arthur Goldsmith)	In-person	3
BIST P8106	MSPH	Existing	Data Science II (Yifei Sun)	In-person	3
BIST P8124	MSPH	Existing	Graphical Models for Complex Health Data (Daniel Malinsky)	In-person	3
BIST P8160	MSPH	Existing	Topics in Advanced Statistical Computing (Ying Wei)	In-person	3
BIST P8122	MSPH	Existing	Statistical Methods for Causal Inference (Linda Valeri)	In-person	3
BIST P8119	MSPH	Existing	Advanced Statistical and Computational Methods in Genetics and Genomics (Annie Li)	In-person	3
EHSC P6351	MSPH	Existing	Introduction to Network Science (Sen Pei)	In-person	3
EHSC P8334	MSPH	Existing	Computational Toxicology (Brandon Pierson)	In-person	3
EPID P8451	MSPH	Existing	Intro to Machine Learning for Epidemiology and Public Health (Jeanette Stingone)	In-person	3
EPID P8477	MSPH	Existing	Epidemiologic Modelling for Infectious Disease (Wan Yang)	In-person	3
AI & Arts, Creativity and Media Concentration (Arts) Choose 4 courses, 12 points:					
COMS W4901	SEAS	Existing	AI and Storytelling (Stephen Edwards)	In-person	3
FILM AF8305	ARTS	Existing	Digital Storytelling I: History and Theory of Interactivity (Char Simpson)	In-person	3
FILM AF8310	ARTS	Existing	Digital Storytelling II: Art, Craft, and Business of Storytelling (Lance Weiler)	In-person	3
FILM AF8315	ARTS	Existing	Digital Storytelling III: Immersive Production (Lance Weiler)	In-person	3
FILM AF8316	ARTS	Existing	World-building and Unbuilding (Char Simpson)	In-person	3
THEA AT6190	ARTS	Existing	Creative Coding (Josh Corn)	In-person	3

FILM AF6810	ARTS	Existing	Coding for Media Studies (Robert King and Behrang Garakani)	In-person	3
FILM GU4951	ARTS	Existing	New Media Art (Robert King and Lance Weiler)	In-person	3
VIAR AV5603	ARTS	Existing	AI and Photography (Naeem Mohaiemen)	In-person	3
FILM GU4045	ARTS	Existing	Augmenting Creativity with AI (Matthieu Lorrain)	In-person	3
ARTS AR6040	ARTS	Existing	Transformative Storytelling (co-taught with Narrative Medicine)	In-person	3
Statistical Foundations in AI (A&S)					
Choose 4 courses, 12 points:					
¹ Students enrolled in this concentration may take STAT GR5241 (Statistical Machine Learning) in lieu of the Machine Learning courses listed in the Core Foundation courses. Students doing so will take three required courses from this concentration (instead of four) and one more AI elective course from SEAS from the elective pool. Additionally, students may take any MA in Statistics courses with prior approval from the Statistics Department (to ensure preparation and seat availability).					
STAT GR5701	A&S	Existing	Probability and Statistics for Data Science (Dobrin Marchev)	In-person	3
STAT GR5702	A&S	Existing	Exploratory Data Analysis and Visualization (Joyce Robbins)	In-person	3
STAT GR5703	A&S	Existing	Statistical Inference and Modeling (Hammou El Barmi)	In-person	3
STAT GR5241 ¹	A&S	Existing	Statistical Machine Learning (Genevera Allen)	In-person	3
STAT GR5242	A&S	Existing	Advanced Machine Learning (Kamiar Rahnema Rad)	In-person	3
STAT GR5244	A&S	Existing	Unsupervised Learning (Genevera Allen)	In-person	3
STAT GR6701	A&S	Existing	Probabilistic Models and Machine Learning (David Blei)	In-person	3
STAT GR5294	A&S	Existing	Topics in Machine Learning & Artificial Intelligence	In-person	3
ELECTIVE COURSES					
Minimum number of elective credits = 6 credits (2 courses)	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether the course is fully, partially, or not at all online	# of Credits
COMS W4731	SEAS	Existing	Computer Vision I (Austin David Reiter)	In-person	3
COMS W4732	SEAS	Existing	Computer Vision II (Austin David Reiter)	In-person	3
COMS W4995	SEAS	Existing	Topics In Computer Science (Topic: Adv Tpcs Comp Security)	In-person	3
COMS W6975	SEAS	New	Advanced Natural Language Processing (Daniel Bauer)	In-person	3
COMS W4706	SEAS	Existing	Spoken Language Processing	In-person	3

COMS W6706	SEAS	Existing	Advanced Spoken Language Processing	In-person	3
COMS W4775	SEAS	Existing	Casual Inference (Elias Bareinboim)	In-person	3
COMS W4776	SEAS	Existing	Neural Networks and Deep Learning (Richard Zemel)	In-person	3
COMS W4901	SEAS	Existing	AI and Storytelling (Stephen Edwards)	In-person	3
COMS W6998	SEAS	Existing	Topics In Computer Science (Topic: Machine Learning & Climate) (Julia Hirschberg)	In-person	3
COMS W4995	SEAS	Existing	Topics In Computer Science (Topic: Data-Driven Design for Social Innovation) (Peter Belhumeur)	In-person	3
COMS W6998	SEAS	Existing	Topics In Computer Science (Topic: Reinforcement Learning LLMs) (Bjarne Stroustrup)	In-person	3
COMS W6113	SEAS	Existing	Agentic Systems Made Real (Junfeng Yang)	In-person	3
CBMF W4761	SEAS	Existing	Computational Genomics (Itsik Pe'er)	In-person	3
BMCS E4480	SEAS	Existing	Statistical Machine Learning for Genomics (Elham Azizi)	In-person	3
BMEN E4460	SEAS	Existing	Deep Learning in Biomedical Imaging (Jia Guo)	In-person	3
BMEN E4470	SEAS	Existing	Deep Learning for Biomedical Signal Processing (Paul Sajda)	In-person	3
EAAE E4000	SEAS	Existing	Machine Learning for Environmental Engineering and Science (Pierre Gentine)	In-person	3
ECBM E4040	SEAS	Existing	Neural Networks & Deep Learning (Zoran Kostic)	In-person	3
CSEE W4121	SEAS	Existing	Computer Systems for Data Science (Asaf Cidon)	In-person	3
ELEN E4620	SEAS	Existing	Numerical Methods for Data Analysis (James Anderson)	In-person	3
ELEN E4730	SEAS	Existing	Quantum Optimization and Machine Learning (Xiaodong Wang)	In-person	3
EECS E4750	SEAS	Existing	Heterogeneous Computing for Signal and Data Processing (Zoran Kostic)	In-person	3
ELEN E4830	SEAS	Existing	Digital Image Processing (Christine Hendon)	In-person	3
EECS E4764	SEAS	Existing	Artificial Intelligence of Things (Xiaofan Jiang)	In-person	3
MEEC E6600	SEAS	Existing	Mathematics of Machine Learning, Signals, and Control	In-person	3
EECS E6991	SEAS	Existing	Advanced Deep Learning	In-person	3
EECS E6992	SEAS	Existing	Deep Learning on Edge	In-person	3
EECS E6694	SEAS	Existing	GenAI and Modern Deep Learning (Micah Goldblum)	In-person	3

EECS E6699	SEAS	Existing	Mathematics of Deep Learning (Predrag Jelenkovic)	In-person	3
EECS E6720	SEAS	Existing	Bayesian Models in ML (John Paisley)	In-person	3
ELEN E6772	SEAS	Existing	Machine Learning for Computer and Communications Networks	In-person	3
ELEN E6820	SEAS	Existing	Speech & Audio Processing & Recognition (Nima Mesgarani)	In-person	3
EECS E6870	SEAS	Existing	Speech Recognition (Bhuvana Ramabhadran)	In-person	3
ELEN E6876	SEAS	Existing	Sparse and Low-Dimensional Models for High-Dimensional Data (John Wright)	In-person	3
ELEN E6885	SEAS	Existing	Topics in Signal Processing (Topic: Reinforcement Learning) (Chong Li)	In-person	3
EECS E6892	SEAS	Existing	Topics in Information Processing (Topic: Reinforcement Learning in Information Systems) (Javad Ghaderi)	In-person	3
EECS E6893	SEAS	Existing	Topics in Information Processing (Topic: Big Data Analytics) (Ching-yung Lin)	In-person	3
EECS E6894	SEAS	Existing	Topics in Information Processing (Topic: Hardware/Software Co-Design for Data Center Processing) (Tanvir Khan)	In-person	3
EECS E6895	SEAS	Existing	Topics in Information Processing (Topic: Advanced Big Data and Artificial Intelligence) (Ethan Katz-Bassett)	In-person	3
ELEN E6908	SEAS	Existing	Embedded AI (Xiaofan Jiang)	In-person	3
EECS E6981	SEAS	Existing	Topics in Information Processing (Topic: Operating, Distributed, and Runtime System Optimization through AI/ML Techniques)	In-person	3
MECE E4602	SEAS	Existing	Intro to Robotics (Sunil Agrawal)	In-person	3
MECE 4611	SEAS	Existing	Robotics Studio (Hod Lipson)	In-person	3
MECE E6615	SEAS	Existing	Advanced Robotic Manipulation (Matei Ciocarlie)	In-person	3
ORCS E4529	SEAS	Existing	Reinforcement Learning (Shipra Agrawal)	In-person	3
ORCS E4200	SEAS	Existing	Data-Driven Decision Modeling (Lily Xu)	In-person	3
IEOR E4742	SEAS	Existing	Deep Learning for OR & FE (Ali Hirsu)	In-person	3
IEOR E4540	SEAS	Existing	Data Mining (Krzysztof Choromanski)	In-person	3
IEOR E4530	SEAS	Existing	AI & Games & Markets (Christian Kroer)	In-person	3
IEOR E4650	SEAS	Existing	Business Analytics (Adam Elmachtoub)	In-person	3
IEOR E4737	SEAS	Existing	AI Applications in Finance (Ali Hirsu)	In-person	3
IEOR E4703	SEAS	Existing	Monte Carlo Simulation Methods (Ali Hirsu)	In-person	3

IEOR E6529	SEAS	Existing	Advanced Reinforcement Learning (Kaizheng Wang)	In-person	3
IEOR E6617	SEAS	Existing	Machine Learning and High-Dimensional Data (Krzysztof Choromanski)	In-person	3
IEOR E8100	SEAS	Existing	Advanced Topics In IEOR (Topic: Agentic AI and Data Economy)	In-person	3
IEOR E8100	SEAS	Existing	Advanced Topics In IEOR (Topic: Diffusion Models AI & RL)	In-person	3
IEOR E8100	SEAS	Existing	Advanced Topics In IEOR (Topic: GenAI: Model Alignment)	In-person	3
CHEN E4020	SEAS	Existing	Protection of Industrial Intellectual Property	In-Person	3
COMS W4460	SEAS	Existing	Principle Innovation Entrepreneurship	In-person	3
IEOR E4998	SEAS	Existing	Managing Technological Innovation and Entrepreneurship	In-person	3
IEOR E4550	SEAS	Existing	Entrepreneurial Business Creation	In-person	3
Electives List:					
TPIN IA7015	SIPA	Existing	Viral Videos, Generative AI, and Geopolitics of a Changing World	In-person	3
TPIN IA7006	SIPA	Existing	Digital Content Provenance: Path to Transparency and Authenticity in the Generative AI World (half course)	In-person	1.5
SIPA IA6152	SIPA	Existing	Democracy and Democratic Erosion in the AI Era (half course)	In-person	1.5
TPIN IA7012	SIPA	Existing	AI: A survey for Policy Makers	In-person	3
USRP IA7112	SIPA	Existing	Ethics, AI, and Urban Governance (half course)	In-person	1.5
CEEN IA7330	SIPA	Existing	AI and Climate Change (half course)	In-person	1.5
DSPC IA7175	SIPA	Existing	Artificial Intelligence Institutions	In-person	3
ISDI IA7102	SIPA	Existing	Artificial Intelligence and Conflict Prevention	In-person	3
SIPA IA6670	SIPA	Existing	Artificial Intelligence in Public Policy (half course)	In-person	1.5
BINF G4001	VP&S	Existing	Introduction to Computing Biomedicine and Health	In-person	3
BINF G4011	VP&S	Existing	Acculturation to Medicine and Clinical Informatics	In-person	3
BINF GU4008 003	VP&S	Existing	Advanced Machine Learning for Health and Medicine	In-person	3
BINF G4003	VP&S	Existing	Symbolic AI for Health Care	In-person	3
BINF G4008 001	VP&S	Existing	Intelligent Decision Support: History, Paradigms, Applications	In-person	3

BINF G4008 002	VP&S	Existing	Interrogating Ethics and Justice in Digital Health	In-person	3
BINF G4019	VP&S	Existing	Computational Epidemiology	In-person	3
BINF G5001	VP&S	Existing	Data Science for Mobile Health	In-person	3
BINF G4013	VP&S	Existing	Biological Sequence Analysis	In-person	3
BINF G4018	VP&S	Existing	Microbiome Data Analysis	In-person	3
BIST P8105	MSPH	Existing	Data Science I (Arthur Goldsmith)	In-person	3
BIST P8106	MSPH	Existing	Data Science II (Yifei Sun)	In-person	3
BIST P8124	MSPH	Existing	Graphical Models for Complex Health Data (Daniel Malinsky)	In-person	3
BIST P8160	MSPH	Existing	Topics in Advanced Statistical Computing (Ying Wei)	In-person	3
BIST P8122	MSPH	Existing	Statistical Methods for Causal Inference (Linda Valeri)	In-person	3
BIST P8119	MSPH	Existing	Advanced Statistical and Computational Methods in Genetics and Genomics (Annie Li)	In-person	3
EHSC P6351	MSPH	Existing	Introduction to Network Science (Sen Pei)	In-person	3
EHSC P8334	MSPH	Existing	Computational Toxicology (Brandon Pierson)	In-person	3
EPID P8451	MSPH	Existing	Intro to Machine Learning for Epidemiology and Public Health (Jeanette Stingone)	In-person	3
EPID P8477	MSPH	Existing	Epidemiologic Modelling for Infectious Disease (Wan Yang)	In-person	3
FILM AF8305	ARTS	Existing	Digital Storytelling I: History and Theory of Interactivity (Char Simpson)	In-person	3
FILM AF8310	ARTS	Existing	Digital Storytelling II: Art, Craft, and Business of Storytelling (Lance Weiler)	In-person	3
FILM AF8315	ARTS	Existing	Digital Storytelling III: Immersive Production (Lance Weiler)	In-person	3
FILM AF8316	ARTS	Existing	World-building and Unbuilding (Char Simpson)	In-person	3
THEA AT6190	ARTS	Existing	Creative Coding (Josh Corn)	In-person	3
FILM AF6810	ARTS	Existing	Coding for Media Studies (Robert King and Behrang Garakani)	In-person	3
FILM GU4951	ARTS	Existing	New Media Art (Robert King and Lance Weiler)	In-person	3
VIAR AV5603	ARTS	Existing	AI and Photography (Naeem Mohaiemen)	In-person	3
FILM GU4045	ARTS	Existing	Augmenting Creativity with AI (Matthieu Lorrain)	In-person	3
ARTS AR6040	ARTS	Existing	Transformative Storytelling (co-taught with Narrative Medicine)	In-person	3
STAT GR5701	A&S	Existing	Probability and Statistics for Data Science (Dobrin Marchev)	In-person	3

STAT GR5702	A&S	Existing	Exploratory Data Analysis and Visualization (Joyce Robbins)	In-person	3
STAT GR5703	A&S	Existing	Statistical Inference and Modeling (Hammou El Barmi)	In-person	3
STAT GR5241	A&S	Existing	Statistical Machine Learning (Genevera Allen)	In-person	3
STAT GR5242	A&S	Existing	Advanced Machine Learning (Kamiar Rahnama Rad)	In-person	3
STAT GR5244	A&S	Existing	Unsupervised Learning (Genevera Allen)	In-person	3
STAT GR6701	A&S	Existing	Probabilistic Models and Machine Learning (David Blei)	In-person	3
STAT GR5294	A&S	Existing	Topics in Machine Learning & Artificial Intelligence	In-person	3

Special Note: Columbia Engineering offers courses called “Topics in...” or “Advanced Topics in...” or “Special topics in...” to denote new emerging courses in the relevant concentration. The course will obtain a permanent number in subsequent offerings; however, the curriculum content remains the same. Some examples of such courses include:

COMS E6998 Topics in Computer Science: Design for Generative AI

EECS E6981 Topics in Information Processing: Operating, Distributed, and Runtime System

Optimization through AI/ML Techniques

ELEN E6885 Topics in Signal Processing: Reinforcement Learning

D) Provide a sample schedule showing the courses the students will take during each semester of the program. For elective or selective courses, simply enter “elective” or “selective.”

The following example shows the schedule for a student enrolled in the Operations/Finances concentration.

Semester 1 (Fall 2026)			
Course Number & Title	Credits	New?	Prerequisites
COMS W4701 Artificial Intelligence (required, 1 of 4)	3	Existing	Python
COMS W4721 Machine Learning for Data Science (required, 2 of 4)	3	Existing	Python
COMS W4710 Ethical and Responsible Artificial Intelligence (required, 3 of 4)	3	Existing	
IEOR E4530 AI, Games and Markets (elective for concentration, 1 of 4)	3	Existing	
TOTAL CREDITS FOR SEMESTER:	12		

Semester 2 (Spring 2027)			
Course Number & Title	Credits	New?	Prerequisites
COMS W4705 Natural Language Processing (required, 4 of 4)	3	Existing	Linear Algebra, Python, Probability, Differential Calculus
IEOR E4703 Monte Carlo Simulation (elective for concentration, 2 of 4)	3	Existing	Stochastic Models
IEOR E4200 Data-Driven Decision Modeling (elective for concentration, 3 of 4)	3	Existing	Optimization Models
IEOR E4737 AI Applications in Finance (elective for concentration, 4 of 4)	3	Existing	Machine Learning
TOTAL CREDITS FOR SEMESTER:	12		

Semester 3 (Fall 2027)			
Course Number & Title	Credits	New?	Prerequisites
IEOR E4650 Business Analytics (elective, 1 of 2)	3	Existing	Python
ORCS E4529 Reinforcement Learning (elective, 2 of 2)	3	Existing	Machine Learning
TOTAL CREDITS FOR SEMESTER:	6		

E) Please provide the typical number of weeks in the Academic Year for this program, counting Fall and Spring semesters. Note that regulations define a “week” as any 7-day period in which ANY instructional activity occurs; this includes classes, discussion sections, labs, exam periods, and study periods. A single activity in a given week counts as a week of school. Virtually the only weeks not to be counted are orientation week and vacation weeks.

We expect the program to follow the regular Fall and Spring semesters (i.e., approximately 16 weeks per semester, 32 weeks per year).

F) Please also indicate the number of weeks IN TOTAL that it would take a typical full-time student to complete the program. For example, for a one-year MS program, which can typically be completed in Fall and Spring semesters, you would likely provide the same answer you gave immediately above (for weeks in the academic year). If a program requires 2 years of study, then you would multiply the number of weeks in the academic year by 2. If Summer terms are included, please include 6-10 weeks, as appropriate, for each Summer term.

A typical full-time student will take 3 semesters to complete the program (approximately 48 weeks). Exceptional students interested in taking part in research, potentially applying to a doctoral program, will have the option to extend their program for the fourth semester by participating in the Advanced Master's Research Specialization. Students are nominated by faculty members to participate.

G) Does the proposed program rely to a significant extent on courses that are offered by other parts of the University? If so, identify those courses and confirm that you have discussed course availability and capacity with the unit in which those courses are housed.

No, students can complete the MSAI degree with courses only from Columbia Engineering. However, we have created concentrations in medicine, public policy, public health, arts, statistics, and the respective units (SIPA, Physicians and Surgeons, the Mailman School of Public Health, School of Arts, Statistics) agreed to offer their courses to the MSAI program. Similar arrangements will be made with other partner schools participating in additional concentrations.

H) For any new courses to be developed for this program, provide a draft syllabus and include information on when the courses have been or will be approved by the appropriate Committee(s) on Instruction.

All in the program exist and have been approved by the Committee on Instruction of Columbia Engineering.

I) Indicate whether course credits earned in the proposed program can also be counted toward another degree or certificate.

Course credits earned in the proposed program cannot be counted toward another degree or certificate.

J) Please provide a proposed CIP code for the program. A full list of CIP codes can be found [here](#). Please choose the CIP code that most closely aligns with the program. For CIP codes that are defined as STEM, the University requires 75% or more of a program curriculum to be STEM-related, particularly as regards to required courses that all students need to take.

11.0102 Artificial Intelligence and Robotics

4) Library Resources: Have you consulted with a library subject specialist about what library resources (e.g., books, databases, journals, streaming video or audio, data sets, etc.) or other support (research consultations, library instruction, etc.) you anticipate needing for this program? If yes, please list those resources expected.

We are not expecting any such needs for this program. We already have an existing technology infrastructure to support this program and the courses.

5) Faculty

A) Provide the name of the program director and the percent of time this individual will dedicate to leadership of the program.

The program will be co-directed by two SEAS faculty members – one of whom is a full member of the Computer Science Department, and the other a full member from another SEAS Department.

Vishal Misra
Professor of Computer Science
Vice Dean of Artificial Intelligence of Columbia Engineering

Garud Iyengar
Professor of Industrial Engineering and Operations Research
The Avanessians Director of the Data Science Institute

The MSAI program will have an Academic Review Board, responsible for planning and regular review of the curriculum and approval of elective courses, in consultation with the Co-Directors, SEAS Dean, and Deans of other schools involved in approved concentrations in this program.

B) Indicate if the program will require the hiring of new faculty either at its inception or by the time it reaches steady state. If so, indicate the number of new faculty it will require, divided between full- and part-time, the subjects they will teach, and the year(s) of their initial appointment.

We do not anticipate hiring new full-time faculty members. In fact, we have been planning and anticipating launching this program, and with this in mind, we have successfully hired many faculty members who have recently started to support this program. The number of Columbia Engineering full-time faculty has grown from 210 to 275+ in the past 10 years. There is ample capacity to offer more programs and teach more sections of courses. Having said that, Columbia Engineering expects, over time, to hire successful practitioners as adjunct faculty to teach additional elective courses.

6) Students

A) Describe the requirements for admission to the program.

All incoming students must possess proficiency in programming (especially Python), data structures/algorithms, linear algebra, and calculus/probability. The admissions criteria will include these prerequisites, with the exception of requiring bridge training for other students. Students without a Computer Science (CS) undergrad can be admitted, conditional on demonstrating this foundational knowledge. For instance, an applicant with a psychology degree but who completed a data science minor and has strong math/programming skills could be a good candidate. To support those from different backgrounds, we will offer bridge modules or prerequisite courses. We will support a student without a Computer Science, Electrical Engineering, or Computer Engineering degree to take an accelerated introduction to computer systems or programming (via Columbia's CS Bridge program for non-majors, or an online preparatory course) before starting the core AI courses. Such courses will not count towards the 30 credits, but would ensure all students begin the program with the necessary footing.

The MSAI's target population is broadly "STEM graduates with an interest in AI." Those with a CS, computer engineering, or software background will likely form the majority (as they can hit the ground running), but the program will also accommodate engineers from other disciplines, science/math

majors, and professionals who may need a bit of ramp-up. By maintaining prerequisite standards and offering bridge support, we can handle students with diverse backgrounds without diluting the rigor of the core curriculum. This approach aligns with the interdisciplinary spirit of the program – e.g., someone with a healthcare background and basic programming skills can learn AI to become a specialist in AI for healthcare, whereas someone with a CS background can deepen in the foundation area or a domain like finance/operations or robotics they haven't worked in before. The mix of backgrounds will enrich class discussions and team projects, as different students bring different domain knowledge into AI applications.

B) Provide the anticipated enrollments of students in the program's first five years, and ultimate enrollment once it reaches steady state. Indicate the number of years it will take to grow the program to its full size.

We anticipate a healthy enrollment and demand for the MSAI program, scaling up in a build-out phase to a steady-state cohort of 150 students per year. The current planning suggests aiming for roughly 150 students per annual intake at steady state, spanning over the technical foundation program and various specialized concentrations. We project the following:

Year	Semester	Projected Students
Year 1	Fall 2026	40-60 students
Year 2	Fall 2027	60-80 students
Year 3	Fall 2028	100-120 students
Year 4	Fall 2029	150 students, steady state

C) If this is a dual-degree program, either between schools of the University or a joint program in collaboration with another institution, describe the support the students will receive from the participating schools or institutions and how the program will ensure that they have access to the courses and resources they will need to complete its requirements.

This is not a dual degree program.

D) Describe the types of jobs or careers for which the program will qualify its students.

Columbia Engineering graduates have had success in gaining employment all over the world. The students in the program will have the same professional development and career placement support as exists in the school. Columbia's program directly prepares graduates for these NYC-based industry clusters, making the location itself a strategic advantage. We anticipate demands for AI talent, our graduates, in the following areas:

Finance and FinTech: JPMorgan, Goldman Sachs, Two Sigma, and countless startups hiring for algorithmic trading, fraud detection, and risk analytics.

Healthcare and Biomedicine: Mount Sinai, NYP, and biotech firms deploying AI for imaging, genomics, and personalized medicine.

Media and Creative Industries: Warner Bros. Discovery, NBC, and the New York Times is integrating generative AI in storytelling and content.

Public Policy and Law: United Nations, New York City government, and law firms grappling with AI regulation and governance.

7) Online Delivery. If the proposed program will have an online component, answer the following questions.

A) Confirm whether the online and in-person programs will be identical with respect to content, admission criteria, student learning objectives, and assessment methods; and if not, indicate how they will differ.

We expect the on-campus and online offerings of the MSAI program to be identical. Our distance learning unit, Columbia Video Network, has had extensive experience and success in offering the same on-campus degree programs online.

B) What percentage of the program will be offered online?

We expect to offer one fully on-campus MSAI program and an identical program online. We are not offering a hybrid option at this moment.

C) Please describe:

a. The online platform you will be using to teach this program.

Canvas Learning Management System (this platform is used University-wide, both for on-campus and online courses), Zoom conferencing platform for synchronous meetings, and Panopto video platform for recorded lectures.

b. Student support resources that will be available to the online students;

Online students receive the same support resources as on-campus students. Columbia Video Network has a dedicated student success team that works closely with students to provide support and resources and connect students with the resources available at the University.

c. How you will authenticate the identity of the online students in the program.

All systems are protected behind CAS, Duo two-factor authentication, and government photo ID for verification.

8) Evaluation

A) Describe how the quality of the program will be evaluated, including the frequency of the reviews and who will conduct them. Describe how student input will be obtained as part of the evaluation of the program.

The program will be evaluated by the MSAI Academic Review Board, responsible for planning and regular review of the curriculum and approval of elective courses, in consultation with the Co-Directors, SEAS Dean, and Deans of other schools involved in approved concentrations in this program.

The following metrics will be included in the evaluation:

1. Undergraduate institutions (domestically and internationally), majors, GPAs of applicants, and test scores
2. Prior professional experience of applicants
3. Number of applications and growth, selectivity, yield, and summer melt. Win/loss ratios of applicants against top programs in the U.S.
4. Course evaluations (each course), student surveys (at least one per semester), program surveys (once a year), student town halls (once a month)
5. Financial aid and merit scholarships
6. Placement data at graduation and 3 months after graduation
7. Employer survey (once a year)
8. Alumni engagement and surveys (once a year).
9. Alumni giving

B) Include a learning outcomes and assessment plan for the proposed program, using the template below.

Program Learning Objectives (PLOs) for Students	Assessment of Learning Outcomes
Please list overall programmatic goals below.	Please indicate primary measures of student learning, which may include direct measures (e.g., coursework) and indirect measures (e.g., alumni outcomes).
PLO #1: Master the Artificial Intelligence core foundation	Coursework and grades in COMS W4701 Artificial Intelligence COMS W4705 Natural Language Processing Choose one: COMS W4771 Machine Learning IEOR E4525 Machine Learning for Operations Research and Financial Engineering ELEN 4720 Machine Learning for Signals, Information, and Data COMS 4721 Machine Learning for Data Science
PLO #2: Master one of the concentrations, including: -Robotics and Perception	Coursework and grades in the courses of each concentration.

-AI in Finance and Operations -AI in Biomedical -AI Infrastructure -AI and UI/UX -AI in Policy/Governance -AI in Health and Medicine	
PLO #3: Able to integrate foundational skills learned in core and specialized courses in a concentration to solve complex problems.	Coursework, outcomes, and engagement in the capstone experience.
PLO #4: Student placement	Internships and positions are offered in AI-related companies and fields. Offers received to relevant doctoral programs.

9) External Review for NEW Master's and Doctoral Programs.

Please provide the names of experts in the field of the program at institutions outside of New York State. Proposed reviewers should be specialists in the area of the program but should not have had an association with Columbia that would compromise the independence of their evaluations. NYSED considers that a conflict of interest exists if a proposed reviewer:

- has had an appointment at the University or is related to someone who has;
- was previously consulted about the development of the proposed program; or
- has a professional relationship with someone at the University, such as collaborating on externally funded research and publications.

For new master's programs, the University must supply one external review; for doctoral programs, two external reviews are required. For this reason, please identify 3 potential reviewers for master's proposals and 5 potential reviewers for doctoral proposals.

For each potential reviewer, include institutional affiliation, contact information, and a link to the individual's website, which lists his/her educational credentials (including where his/her degrees were received) and employment history. If full information on degrees and employment cannot be viewed from the website, NYSED may require that we supply them with the individual's CV.

Please note that this requirement does not apply to new DUAL or JOINT degree programs, or to new BACHELOR's programs; we do not need to submit external reviews for these programs.

Rama Chellappa

Bloomberg Distinguished Professor and Interim Director of the Data Science and AI Institute
 Johns Hopkins University

<https://engineering.jhu.edu/faculty/rama-chellappa/>

Alexandros G. Dimakis

Professor, Electrical Engineering and Computer Science Department
 Co-Founder BespokeLabs.ai

Co-Director of the National AI Institute for Foundations of Machine Learning
 University of California, Berkeley

<https://people.eecs.berkeley.edu/~alexdimakis/>

Eric Horvitz
Chief Scientific Officer
Microsoft
<https://erichorvitz.com/>

Fei Fei Li
Sequoia Capital Professor, Denning Co-Director Standard Institute for Human-Centered AI, Senior Fellow at HAI and Professor
Stanford University
<https://profiles.stanford.edu/fei-fei-li>

Shrikanth (Shri) Narayanan
Vice President for Presidential Initiatives and University Professor
University of Southern California
<https://viterbi.usc.edu/directory/faculty/Narayanan/Shrikanth>

Sethuraman Panchanathan
Professor and Founding Chair in Computing and Informatics
Arizona State University
(former Director of the National Science Foundation)
<https://search.asu.edu/profile/88253>

Vishal Talwar
Chief Digital & Information Officer of FedEx
President of FedEx Dataworks
<https://www.fedex.com/en-us/about/leadership/vishal-talwar.html>

Our projected enrollments are as follows:

Year	Semester	Projected Students
Year 1	Fall 2026	40-60 students
Year 2	Fall 2027	60-80 students
Year 3	Fall 2028	100-120 students
Year 4	Fall 2029	150 students



October 8, 2025

To: Columbia University Senate

From: Shih-Fu Chang, Dean of Columbia Engineering
Vishal Misra, Vice Dean of Computing and Artificial Intelligence

Subject: Support of Columbia Engineering's MS in Artificial Intelligence Degree

We are pleased and excited to offer our strong support for the proposed Master of Science in Artificial Intelligence led by Columbia Engineering at Columbia University. This innovative program represents an important and timely advancement in our academic offerings, designed to prepare the next generation of leaders in an era defined by data-driven decision-making, intelligent systems, and automation. This degree also marks a truly interdisciplinary offering between multiple schools on campus, including specialized concentrations developed in collaboration with the School of the Arts, the School of International and Public Affairs, the Mailman School of Public Health, and the Vagelos College of Physicians and Surgeons. We are excited about this cross-disciplinary structure, which can serve as an example for broad priority areas across campus.

Artificial intelligence is rapidly transforming every sector of society—from engineering design to smart infrastructure, finance, healthcare, media, arts, and many other fields. The proposed program integrates foundational principles with advanced AI methodologies, ensuring that graduates are not only proficient in computational tools but also capable of applying them to solve complex, real-world problems.

The curriculum has been thoughtfully developed through collaboration among faculty across multiple departments in engineering, across schools and disciplines, and informed by industry partners. It emphasizes rigorous technical foundation, experiential learning, responsible and ethical innovation, and interdisciplinary collaboration—hallmarks of our university's educational philosophy. We are also very proud of a course developed and taught by our faculty member, Ansaf Saleb-Aouissi, on responsible and ethical AI that has taken a thoughtful approach to the issues of ethics, fairness, privacy, security, and inclusion in AI.

This program aligns closely with the university's strategic priorities in innovation, research, and societal impact. It strengthens our position as a leader in AI, a fundamental discipline in engineering and computer science, with broad cross-school collaborations. It also responds directly to the growing demand for professionals who can bridge the gap between various disciplines and emerging AI technologies.

We are thrilled to propose the MS in Artificial Intelligence program and commend our faculty for their vision and dedication in developing this forward-looking initiative. The program will enrich our academic community and contribute meaningfully to the advancement of the university's mission in the emerging AI era.

Warm Regards,

Shih-Fu Chang

Dean of Columbia Engineering

Vishal Misra

Vice Dean of Computing and Artificial Intelligence

Date: October 8, 2025

To: Columbia University Senate

From: Garud Iyengar
Avanessians Director of the Data Science Institute

Subject: Support of Columbia Engineering's MS in Artificial Intelligence Degree

I am writing to share my excitement and commitment to the proposed Master of Science in Artificial Intelligence program proposed by Columbia Engineering. As the Director of the Data Science Institute, with expertise in applying data-driven methods to broad scientific challenges, I believe this program is both timely and essential.

The advancement of artificial intelligence, built on the fundamental breakthroughs in computer science and engineering, represents one of the most transformative frontiers in modern innovation. The ability to integrate deep learning, large language models, embodied AI, and intelligent agents into complex systems is rapidly becoming a critical skill set across all industries and disciplines, from advanced manufacturing, robotics, and energy systems to medicine and health, policy and governance, and the creative arts.

The proposed program's combination of rigorous foundations of state-of-the-art AI and its emphasis on responsible and ethical AI, and interdisciplinary collaboration will prepare graduates to not only deploy AI tools effectively but also to lead in designing responsible, data-driven solutions to complex societal problems. I am particularly excited that the MS in AI is designed with concentrations in many different disciplines that are spread across multiple schools at Columbia.

This new graduate program will fill an important gap in higher education by producing professionals who can bridge the divide between disciplinary training in the foundations of AI and domain expertise that is critically important for its successful application. This integration is precisely what industry and research organizations need to advance AI innovation and integration.

The cross-disciplinary structure of this proposed program is fully aligned with the mission of the Data Science Institute in serving the campus-wide community. With this, I am privileged to serve as an inaugural co-director and am committed to working with the faculty across schools to achieve the maximal impact on this very important university priority.

Sincerely,



Garud Iyengar
Avanessians Director of the Data Science Institute
Professor of Industrial Engineering and Operations Research

Katrina Armstrong, MD



*Dean of the Faculties of Health Sciences and
the Vagelos College of Physicians and
Surgeons
Executive Vice President for Health and
Biomedical Sciences
Harold and Margaret Hatch Professor of the
University*

Date: October 8, 2025

To: Columbia University Senate

Subject: Support of Columbia Engineering's MS in Artificial Intelligence Program

I am writing to express my enthusiastic support for the proposed Master of Science in Artificial Intelligence program, and particularly for the concentration in Health and Medicine. This innovative program stands to revolutionize healthcare delivery by harnessing the power of AI to address critical challenges and improve patient outcomes.

AI's ability to mine electronic health records (EHRs) and identify meaningful patterns in unstructured data is transformative. Although not possible today, it has the potential to uncover complex correlations that might be overlooked, enabling clinicians to make informed decisions quickly and accurately. To realize that potential, we need future leaders trained in both the fundamentals of AI and its application in the field of health and medicine.

AI's role in sensing, aggregating, and harnessing data across various sources and scales (from molecules to tissues to systems) will provide unprecedented opportunities for diagnosis, therapeutics, and prevention of diseases and medical disorders. Intelligent healthcare decision support systems powered by AI will assist medical professionals by offering evidence-based recommendations, ultimately enhancing decision-making processes and patient care. This program will equip students with the skills to develop personalized medicine approaches, tailoring treatments based on individual genetic profiles and health data for more effective interventions.

We have enthusiastically worked with SEAS to develop a concentration in health and medicine leveraging our complementary strength in the Department of Biomedical Informatics and related areas. With this partnership under the MSAI program, Columbia will be poised to lead the way in training a new generation of experts capable of integrating AI into medicine and health. This program promises to cultivate pioneers who will drive innovation and elevate healthcare to new heights. I wholeheartedly support this visionary initiative and am excited about the profound impact it will have on future healthcare advancements and medical education.

All my best,

Katrina Armstrong, MD

Vagelos College of Physicians and Surgeons
Columbia University Irving Medical Center

630 West 168th Street, New York, NY 10032

Interim Dean

*Barbara and Bruce P. Dobrenwend Professor of
Sociomedical Sciences*

*Director, Global and Population Mental Health
Columbia University Mailman School of Public Health*

Date: October 8, 2025

To: Columbia University Senate

From: Kathleen Sikkema, Interim Dean of the Mailman School of Public Health

Subject: Support of Columbia Engineering's MS in Artificial Intelligence Program

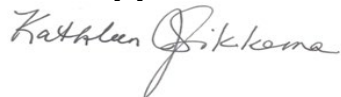
I am writing to express my strong support for the proposed Master of Science degree in Artificial Intelligence, with multiple interdisciplinary concentrations, including one in Public Health. The intersection of AI and public health is a frontier that holds immense promise for transforming healthcare and promoting well-being on a global scale.

In the realm of data science, AI offers unprecedented opportunities for analyzing vast datasets to uncover patterns that can inform public health decisions and policy. Its applications in genetics allow for personalized medicine approaches, advancing our understanding of genetic predispositions and potential interventions. Network science, enhanced by AI, can improve our comprehension of how diseases spread, helping devise robust strategies to curb outbreaks. AI's role in toxicology can lead to better assessment methods for environmental risks, ensuring safer communities by identifying hazardous substances with higher precision. Moreover, in epidemiology, AI's predictive capabilities can revolutionize disease surveillance, enhancing our ability to anticipate and respond to health threats. Similarly, in managing infectious diseases, AI technologies can optimize vaccine distribution and track disease progression, ultimately saving lives.

Columbia Engineering's proposed degree provides not only an education in the fundamentals of AI, including machine learning, deep learning, and natural language processing, with a critical formal exploration of responsible and ethical AI, but the concentrations allow students to pursue their passions in a wide range of fields. The Mailman School of Public Health is enthusiastically collaborating with Columbia Engineering to provide a concentration in Public Health populated by our robust offering of courses that leverage AI for the public good.

This novel program is an essential step towards preparing leaders who can harness AI's potential to advance public health. I am excited about the transformative impact this initiative will have on both academia and real-world health outcomes.

Sincerely yours,



Kathleen Sikkema

COLUMBIA UNIVERSITY SCHOOL OF THE ARTS

OFFICE OF THE DEAN

October 8, 2025

To the Columbia University Senate,

I am writing to convey my support for Columbia Engineering's proposal for its new MS in Artificial Intelligence (AI) program. This new MS program is very timely, given the ubiquity of AI in our society and its potential to transform our world in untold ways. A rigorous program in the fundamentals of AI, including a detailed exploration of ethical and responsible AI, will be a much-needed addition to the University's portfolio. The design of the curriculum is built on the strength of the AI foundation within Computer Science and Engineering. I am particularly enthusiastic about the program's cross-school opportunities for students. As such, the School of the Arts is excited to collaborate with Columbia Engineering in offering a concentration within the MS in AI, entitled "Arts, Creativity, and Media."

The School of the Arts has a number of courses that apply AI tools to creative pursuits, and we recognize the enormous significance of AI in all arts disciplines. Our courses will provide a meaningful specialization to complement the core foundation in Engineering. The curriculum for this specialization has been developed in consultation with Columbia Engineering and leverages existing collaborations, including courses jointly taught by faculty from arts and computer science, e.g. AI and Storytelling.

The degree will provide students with the knowledge and skills necessary for building their careers in creative disciplines while drawing on a deep technical foundation in AI provided by the core foundation. As technology advances, this concentration will help to educate future leaders in the creative arts. It does not prevent the School of the Arts from developing other courses of study in AI in the future.

On behalf of Columbia's School of the Arts, I support the MS in AI degree led by SEAS and look forward to watching our students push creative boundaries in the coming years.

Sincerely,



Sarah Cole

Dean of the School of the Arts

Parr Professor of English and Comparative Literature

COLUMBIA UNIVERSITY

IN THE CITY OF NEW YORK

SCHOOL OF INTERNATIONAL AND PUBLIC AFFAIRS

Date: October 9, 2025

To: Columbia University Senate

From: Keren Yarhi-Milo, Dean of the School of International and Public Affairs

Subject: Support of Columbia Engineering's MS in Artificial Intelligence

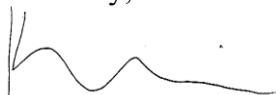
I write to express my enthusiastic support for the new MS in Artificial Intelligence (AI) proposed by Columbia Engineering. This innovative new program is an essential addition to the academic landscape and addresses a critical need in our rapidly evolving world. AI is transforming industries, economies, and society at an unprecedented pace. As we stand on the brink of an AI-driven future, the integration of AI technology with thoughtful policy and governance is crucial to ensuring ethical and responsible advancements. This program is especially timely in that it combines a rigorous technical foundation in AI with the promise to equip students with the skills to navigate the complex intersection of technology and societal impact, preparing them to become leaders in shaping responsible AI implementation.

Moreover, this concentration reflects a forward-thinking approach by recognizing the importance of governance frameworks and policy development in the AI realm. By educating future policymakers, technologists, and ethicists together, this program will foster interdisciplinary collaboration that is vital for addressing global challenges. The structure of the curriculum, particularly for the concentration in Policy and Governance, leverages the expertise of both schools to educate the next generation of global leaders. It is a model example of cross-school collaboration that provides a unique education that is possible only at Columbia University.

I anticipate that this degree will be very appealing to SEAS students who want an introduction to the policy frameworks for understanding the opportunities and challenges of AI, and how we can build AI focused on the social good. SIPA has a robust Technology Policy concentration which we expect to grow in the coming years as students become so much more alert to the dangers of ungoverned technology development. These students are likely to benefit from an introduction to the AI technology and see this new degree as opening more possibilities for collaboration between SIPA and SEAS.

I am very excited about the potential impact of this program. It is a bold step forward, fostering a new generation of experts who will drive AI innovation while safeguarding fundamental human values. Please count on my full support as this valuable program comes to fruition.

Sincerely,



Keren Yarhi-Milo
Dean, School of International and Public Affairs
Adlai E. Stevenson Professor of International Relations

OFFICE OF THE DEAN

University Senate

Proposed: December 12, 2025

Adopted: December 12, 2025

66-0-0: In favor-Opposed-Abstained

**RESOLUTION TO APPROVE AN UPDATED
COLUMBIA UNIVERSITY INSTITUTIONAL POLICY ON MISCONDUCT IN RESEARCH**

WHEREAS the University administration seeks to update the previously established Columbia University Institutional Policy on Misconduct and Research, which itself was unanimously approved in 2006 both to consolidate the previous two policies covering Columbia University and the Health Sciences Campus and to come into compliance with federal regulations; and

WHEREAS Columbia University must again bring its institutional policies on research into compliance with mandatory federal guidelines promulgated by the U.S. Department of Health and Human Services coming into effect on January 1, 2026, which among other changes formalize the role of the Research Integrity Officer, require a formal pre-inquiry assessment of allegations, and more clearly define some key terms; and

THEREFORE BE IT RESOLVED that the University Senate approve the attached and updated Columbia University Institutional Policy on Misconduct in Research, which will be displayed in appropriate University publications, including the Faculty Handbook.

Proponent: External Relations and Research Policy Committee

Overview of Institutional Policy on Misconduct in Research and Required Revisions

Background

Columbia's current Institutional Policy on Misconduct in Research ("Policy") was adopted by the University Senate in February 2006 (proposed by the Executive Committee and approved without dissent) and is set out in the [Faculty Handbook](#). U.S. federal funding agencies require institutions like Columbia to promulgate such policies in accordance with federal regulations. Columbia's University-wide Policy sets forth the procedures required for handling allegations of research misconduct, defined per the regulations as fabrication, falsification or plagiarism at any point in the research lifecycle, from proposal through conduct and reporting of research.

Columbia's Policy requires the appointment of a Standing Committee on the Conduct of Research, a University-wide committee that oversees the research misconduct process. The Office of Research Compliance and Training (RCT) administers the Policy; the Vice President for Research Compliance, Training and Policy serves as the University's Research Integrity Officer, a role required by the U.S. Department of Health and Human Services (HHS).

By definition, research misconduct does not include honest error, differences in interpretation, self-plagiarism, or authorship disputes. A finding of research misconduct requires a finding that the respondent falsified, fabricated or plagiarized research intentionally, knowingly or recklessly, and that these actions constituted a significant departure from the standards of the relevant research community.

Revisions to Federal Regulations

In Fall 2024, HHS's Office of Research Integrity (HHS ORI) published revised regulations ("Revised Regulations") governing misconduct in research for research funded by the Public Health Service, including NIH and other funders. The revised regulations add several definitions and update and formalize procedures and best practices already in place at many institutions, including Columbia. The revised regulations require institutions to issue revised policies by January 1, 2026.

Revisions to Columbia's Policy

RCT identified key changes in the Revised Regulations and discussed them at two meetings of the Standing Committee on the Conduct of Research. With input from the Standing Committee and input from internal and external counsel, RCT developed a draft revision to the Policy ("Revised Policy") and discussed the Revised Policy at two meetings of the External Relations and Research Policy Committee of the University Senate. The External Relations and Research Policy Committee voted unanimously to move the Revised Policy forward to the plenary of the Senate for approval. In both cases, all agreed that the proposed changes should apply to all Columbia research, not only that funded by the Public Health Service. However, certain PHS-specific procedural requirements are outlined in an Appendix to the Policy.

Summary of Changes

The overall research misconduct procedures, including the role of the Standing Committee, review by ad hoc committees, the standard of review, and due process protections for all

involved, remain unchanged. However, some terminology and definitions have been updated and some previous University practices have now been codified, as highlighted below.

- **Formalization of role of Research Integrity Officer.** Appointed by EVP for Research, head of Office of Research Compliance and Training.
- **Addition of formal Assessment of potential research misconduct concerns.** Assessment is conducted by the Research Integrity Officer or designee in collaboration with co-chairs of the Standing Committee, to determine whether the concern meets the definition of research misconduct and is sufficiently credible and specific to enable identification of relevant evidence. Must be documented.
- **Definitions of required states of mind, including definition of “recklessly”:** “To act recklessly means to propose, perform, or review research, or report results, with indifference to a known risk.”
- **Formal incorporation of prior guidance regarding plagiarism:** “....does not include disputes between formal collaborators who participated jointly in the development or conduct of a research project.”
- **Six-year statute of limitations,** with exceptions for subsequent use of allegedly falsified or fabricated data and for public health or safety.
- **No informal resolution of research misconduct concerns brought to an institutional official:** concerns brought to a department chair, dean’s office, or other institutional official must be assessed by the Research Integrity Officer.
- **Conflicts of interest:** in extraordinary circumstances, to mitigate a potential conflict of interest, the University may, as appropriate, utilize external resources with appropriate expertise to carry out any role called for by the Misconduct Policy.

Appendix I. Columbia University Institutional Policy on Misconduct in Research

The Columbia University Institutional Policy on Misconduct in Research was adopted by the University Senate on February 3, 2006, and revised on _____, 2025.

Section A. Introduction

Columbia is committed to upholding the highest standards of scientific rigor in research. The University is committed to fostering an environment that promotes research integrity and the responsible conduct of research, discourages research misconduct, and deals promptly with allegations or evidence of possible research misconduct.

All individuals conducting research under the auspices of Columbia are expected to conduct research with honesty, rigor, and transparency. Each such individual is responsible for contributing to an organizational culture that establishes, maintains, and promotes research integrity and the responsible conduct of research.

Columbia University believes that the occurrence of research misconduct is a threat to the basic principles of research. Misconduct in research damages the integrity of the profession and undermines the credibility of scholars. It is also antithetical to the values the University strives to maintain and promote.

The University takes seriously all allegations of research misconduct, and believes that the procedures for the assessment, inquiry, investigation and adjudication of any research misconduct concern should be clear for all parties involved. The University is also cognizant of the need for protections for the complainant, the respondent and all witnesses involved in any research misconduct proceeding. This Policy is designed to address both of these issues.

Allegations of research misconduct shall be addressed in accordance with this Policy and applicable regulations and policies. This Policy is based on the Federal Policy on Research Misconduct (the “OSTP Policy”) of the Office of Science and Technology Policy, with revisions added based on the Public Health Service Policies on Research Misconduct (the “PHS Final Rule”), codified at 42 CFR 93, applicable on January 1, 2026. In accordance with the OSTP Policy and the definitions below, “*Research Misconduct*” means any Fabrication, Falsification or Plagiarism in proposing, performing or reviewing Research or reporting Research results. Research Misconduct does not include honest error or differences of opinion.

This is a University-wide Policy which applies to all individuals conducting research under the auspices of the University, including Officers of Instruction, Officers of Research, Officers of the Libraries, students and members of the research staff, who may be involved in research at the University and all Research conducted by such individuals, whether or not federally funded, and proposals for such Research, other than Research undertaken in fulfillment of a course requirement (unless there is an expectation of publication or dissemination outside the University of the results of such Research). This Policy applies to such Research even if the individual who conducted such Research is no longer affiliated with the University.

Section B. Definitions

“Allegation”: a disclosure of possible Research Misconduct through any means of communication and brought directly to the attention of an Institutional Official.

“Complainant”: the individual bringing an Allegation of Research Misconduct.

“Fabrication”: the making up of data or results and the recording or reporting thereof.

“Falsification”: the manipulation of Research materials, equipment or processes, or the change or omission of data or results such that the Research is not accurately represented in the Research Record.

“Good Faith”: as applied to a Complainant, Respondent or Witness, includes having a belief in the truth of one’s Allegation or testimony that a reasonable person in any of these roles could have, based on the information known to the Complainant, Respondent or Witness at the time. An Allegation of or cooperation with a Research Misconduct proceeding is not in good faith if made with knowledge of or reckless disregard for information that would negate the Allegation or testimony. Good Faith as applied to a member of the Standing Committee or any Inquiry or Investigation Committee includes cooperating with the Research Misconduct proceeding by carrying out the duties assigned impartially for the purpose of helping the University meet its responsibilities under this Policy. A member of the Standing Committee or any Inquiry or Investigation Committee does not act in Good Faith if his/her acts or omissions during the Research Misconduct proceedings are dishonest or influenced by personal, professional or financial conflicts of interest with those involved in the Research Misconduct proceeding.

“Institutional Official”: the President, Executive Vice Presidents, the Provost and vice provosts, vice presidents, other senior officers, deans and vice-deans, associate deans, department chairs, division chiefs, and institute and center directors, but excluding any member of the Ombuds office.

“Intentionally”: To act intentionally means to act with the aim of carrying out the act.

“Knowingly”: To act knowingly means to act with awareness of the act.

“Plagiarism”: the appropriation of another person’s ideas, processes, results or words without giving appropriate credit. Plagiarism includes the unattributed verbatim or nearly verbatim copying of sentences and paragraphs from another’s work that materially misleads the reader regarding the contributions of the author. It does not include the limited use of identical or nearly identical phrases that describe a commonly used methodology. Plagiarism also does not include self-plagiarism or authorship or credit disputes, including disputes among former collaborators who participated jointly in the development or conduct of a research project. Self-plagiarism and authorship disputes do not meet the definition of Research Misconduct.

“Preponderance of the Evidence”: proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not.

“Recklessly”: To act recklessly means to propose, perform, or review research, or report research results, with indifference to a known risk of fabrication, falsification, or plagiarism.

“Research”: any systematic experiment, study, evaluation, demonstration, survey, or creative activity designed to develop or contribute to general knowledge (basic research) or specific

knowledge (applied research) by establishing, discovering, developing, elucidating, or confirming information. This applies to all fields of scholarly study, including but not limited to all fields of science, mathematics, engineering, arts, and the humanities.

“Research Misconduct”: Fabrication, Falsification, or Plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research Misconduct does not include honest error or differences of opinion.

“Research Record”: the record of data or results that embody the facts resulting from the research inquiry, including, without limitation, research proposals, laboratory records, both physical and electronic, progress reports, abstracts, theses, oral presentations, internal reports and journal articles.

“Respondent”: the individual who is the subject of an Allegation.

“Responsible Academic Officer”: with respect to any Respondent, the Chair, Dean or Director of the Department, School, Institute, Center or equivalent unit at the University of which such Respondent is a member.

“Retaliation”: an adverse action taken against a Complainant, Witness, or Committee member by the University or one of its members in response to a Good Faith allegation of research misconduct, or Good Faith cooperation with a research misconduct proceeding.

“Witness”: any individual who testifies or provides information with regard to an Allegation or whose Research Record is used as evidence during the course of a Research Misconduct proceeding.

Section C. Compliance with Laws, Regulations and Policies

The administrative procedures to be followed by the University pursuant to this Policy are, in all cases, subject to the requirements of law. The University will comply with all applicable federal and state laws, regulations and policies with respect to Research Misconduct.

To the extent that any Research that is subject to an Allegation was supported by, or is proposed to be supported by, a federal agency whose Research Misconduct regulations and policies are inconsistent with this Policy, the terms of such agency’s Research Misconduct regulations and policies shall apply to the administrative processes described herein. Such other terms, if any, may be described in Annexes to this Policy, as amended from time to time.

Section D. The Committee on the Conduct of Research and the Research Integrity Officer

1. The University has formed a special standing committee of Officers of Instruction, Officers of Research, Officers of the Libraries (collectively, the *“Officers”*) and students designated The Committee on the Conduct of Research (the *“Standing Committee”*) which will be responsible for setting and communicating standards with respect to Research Misconduct and overseeing the administrative procedures relating to the review of any allegation of Research Misconduct.
2. The members of the Standing Committee will be appointed by the Executive Vice President for Research (the *“EVPR”*). The Standing Committee shall have at least eleven

members, at least five of whom shall be selected from the Officers and students at the Columbia University Medical Center (“CUMC”) and at least five of whom shall be selected from the Officers and students of the University other than those at CUMC. The Standing Committee shall include at least one Officer of Research at CUMC, one Officer of Research at a campus of the University other than CUMC, one Officer of the Libraries and one student involved in Research at the University. The EVPR shall appoint at least one of the members as Chair of the Standing Committee. The Standing Committee members shall have staggered four-year terms which may be renewable.

3. The safeguards described in Section M below shall be provided to the members of the Standing Committee, as applicable.
4. The EVPR will appoint the head of the Office of Research Compliance and Training to serve as the University’s Research Integrity Officer (“*Research Integrity Officer*” or “*RIO*”). The RIO will be responsible for administering the University’s written policies and procedures for addressing allegations of research misconduct, in collaboration and consultation with the Standing Committee.
5. Any individual who has questions with respect to the Research Misconduct Policy may privately meet with the RIO and/or any member of the Standing Committee to discuss such questions.

Section E. The Making of an Allegation

1. An Allegation may be communicated through any means to (a) the RIO, or (b) to another Institutional Official, who must promptly transmit such Allegation to the RIO for an Assessment.
2. An Allegation may have profound implications for the Complainant, the Respondent and any Witness in a Research Misconduct proceeding and any individual making an Allegation should take great care in providing the basis of any charge.

Section F. Institutional Response to an Allegation of Research Misconduct

1. The University’s response to an Allegation shall consist of up to five phases:
 - **Assessment:** a consideration, through review of readily accessible information relevant to such Allegation, of whether such Allegation appears to fall within the definition of Research Misconduct, and is sufficiently credible and specific so that potential evidence of research misconduct may be identified (an “*Assessment*”);
 - **Inquiry:** the gathering of preliminary information and fact-finding to assess whether such Allegation has substance and if so, whether an Investigation is warranted (an “*Inquiry*”);
 - **Investigation:** the formal development of a factual record with respect to such Allegation and the examination and evaluation of such record leading to dismissal of the case or a recommendation of a finding of Research Misconduct and/or other appropriate corrective actions (an “*Investigation*”); and
 - **Adjudication:** the formal procedure for reviewing and evaluating the evidentiary record and report of an Investigation and for determining whether to agree with the recommended findings and to impose appropriate corrective actions (an “*Adjudication*”).

- **Appeal:** the formal procedure for determining whether to affirm, overturn, or modify the Adjudication (an “*Appeal*”).
2. It is expected that the Complainant, the Respondent and any other person involved in the administrative procedures described in this Policy will act in Good Faith in participating in such procedures.

Section G. Prerequisites for Finding of Research Misconduct

1. A finding of Research Misconduct requires the satisfaction of all of the following prerequisites:
 - there has been a significant departure from accepted practices in the relevant research community;
 - the Research Misconduct has been committed Intentionally, Knowingly or Recklessly; and
 - the Allegation is proven by a Preponderance of the Evidence.
2. Time Limits: This Policy applies only to Research Misconduct occurring within six years of the date the University receives an Allegation, except under either of the following conditions:
 - Subsequent use exception: The Respondent continues or renews any incident of alleged research misconduct that occurred before the six-year limitation through the use of, republication of, or citation to the portion(s) of the research record (e.g., processed data, journal articles, funding proposals, data repositories) alleged to have been fabricated, falsified, or plagiarized, for the potential benefit of the Respondent.
 - When the Respondent uses, republishes, or cites to the portion(s) of the research record that is alleged to have been fabricated, falsified, or plagiarized, in submitted or published manuscripts, submitted grant applications, progress reports submitted to funding agencies, posters, presentations, or other research records within six years of when the Allegation was received by the University, this exception applies.
 - Exception for the health or safety of the public: If the University (in consultation with a funding agency, where required) determines that the alleged Research Misconduct, if it occurred, would possibly have a substantial adverse effect on the health or safety of the public, this exception applies.

Section H. The Assessment Phase

1. An Institutional Official who receives an Allegation must promptly transmit such Allegation to the RIO for an Assessment.
2. The RIO, in consultation with the Chair(s) of the Standing Committee, and/or other relevant experts, is responsible for promptly conducting the Assessment.
3. Conducting the Assessment must include a determination whether the Allegation (a) falls within the definition of Research Misconduct, including the time limits provisions of this Policy, and (b) is sufficiently credible and specific so that potential evidence of research

misconduct may be identified. If both criteria are met, an Inquiry is warranted. The Assessment only involves the review of readily accessible information relevant to the Allegation.

4. The RIO must keep sufficiently detailed documentation of the Assessment to permit a later review by the Standing Committee and any relevant sponsor of the reasons why an Inquiry was or was not warranted.
5. Should the Assessment conclude that Allegation does not appear to fall within the definition of Research Misconduct, but raises other potential compliance concerns, it should be referred to the appropriate office or individual for review. If the matter does not raise compliance concerns, it may be resolved informally by the Responsible Academic Officer and others who may be appropriate.

Section I. The Inquiry Phase

1. If, at the conclusion of an Assessment, the RIO determines that an Inquiry is warranted, the Chair(s) of the Standing Committee shall (a) notify (i) the Complainant, (ii) the Respondent, (iii) the appropriate Responsible Academic Officer and (iv) if the Allegation involves a Respondent who is an Officer of Instruction, Officer of Research, Officer of the Libraries, student or member of the research staff at CUMC (a "CUMC Respondent"), the Executive Vice President for Health Sciences (the "EVPHS") of the filing of the Allegation and the sources thereof and (b) in consultation with members of the Standing Committee, select three or more persons who are Officers of Instruction, Officers of Research, Officers of the Libraries or students (the "*Inquiry Committee*"), who may or may not be members of the Standing Committee, to assess the Allegation. In selecting the members of the Inquiry Committee, the Chair(s) of the Standing Committee should consider appointing a representative of the Complainant's and/or the Respondent's peer group.
2. On or before the date on which a Respondent is notified of the filing of an Allegation against him/her and at any other time during the Research Misconduct proceeding when additional records or evidence are discovered, the Standing Committee shall promptly take all reasonable and practical steps to obtain custody of all of the Research Record and evidence needed to conduct the Research Misconduct proceeding, inventory the Research Record and evidence, and sequester them in a secure manner, except that where the Research Record or evidence encompasses scientific instruments shared by a number of users, custody may be limited to copies of the data or evidence on such instruments, so long as those copies are substantially equivalent to the evidentiary value of the instruments.
3. The Inquiry Committee shall review such evidence and interview such persons as may be necessary to make an assessment of whether the Allegation has substance and whether an Investigation is warranted.
4. If the RIO (in consultation with the Chair(s) of the Standing Committee) or the Inquiry Committee identifies additional Respondents during the Inquiry, the University is not required to conduct a separate Inquiry for each new Respondent. However, each additional Respondent must be provided notice of and an opportunity to respond to the Allegation, consistent with the other requirements of this Policy.

5. The safeguards described in Section M below shall be provided to the Complainant, the Respondent, any Witness and any Inquiry Committee member, as applicable, during the Inquiry.
6. Upon completion of the Inquiry, the Inquiry Committee shall provide the Respondent with a draft written report (the "*Inquiry Report*") of its findings and recommendation as to whether or not an Investigation is warranted. The Inquiry Committee shall also provide the Complainant with copies of those portions of the Inquiry Report relevant to the Complainant. The Respondent and the Complainant may comment on the draft Inquiry Report.
7. Following the review by the Inquiry Committee of any comments on the draft Inquiry Report provided by the Respondent or the Complainant, the Inquiry Committee shall provide the Standing Committee with a final Inquiry Report.
8. The Standing Committee may accept or reject the recommendation of the Inquiry Committee and shall promptly provide the Complainant, the Respondent and the appropriate Responsible Academic Officer with written notification of its decision, indicating in such notification the principal reasons for such decision and a copy of the final Inquiry Report.
9. In general, an Inquiry should be completed within 90 days of its initiation, provided that the Standing Committee may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section J. The Investigation Phase

1. If, at the conclusion of an Inquiry, the Standing Committee determines that an Investigation is warranted, the Chair(s) of the Standing Committee shall so notify, in addition to the persons listed in Section I.8 above, (a) the EVPR, (b) if the Allegation involves a CUMC Respondent, the EVPHS, and (c) if the Allegation involves federally funded research (or an application for federal funding), the applicable funding agency or agencies (collectively, the "*Funding Agency*") in accordance with Funding Agency requirements
2. The Standing Committee shall appoint a committee (the "*Investigation Committee*") to conduct the Investigation, which shall consist of at least three members, none of whom is a member of the Standing Committee or served as a member of the Inquiry Committee with respect to the Allegation relating to such Investigation and at least one of whom is an expert in the area of research that is the subject of such Investigation. In constituting the Investigation Committee, the Standing Committee shall select as members those persons who have the expertise pertinent to the matter and who will carry out the Investigation thoroughly, fairly and promptly and should consider appointing a representative of the Respondent's or the Complainant's peer group. The Standing Committee may appoint a person who is not affiliated with the University to the Investigation Committee if such person has the requisite expertise. The Standing Committee shall select one of the members as the Chair of the Investigation Committee.
3. The Investigation Committee shall:

- use diligent efforts to ensure that the Investigation is thorough and sufficiently documented and includes the examination of all Research records and evidence relevant to reaching a decision on the merits of the Allegation;
 - take reasonable steps to ensure an impartial and unbiased Investigation to the maximum extent practicable;
 - interview the Complainant, the Respondent and any other available person who has been reasonably identified as having information regarding any relevant aspects of the Investigation; and
 - pursue diligently all significant issues and leads discovered that are relevant to the Investigation.
4. The safeguards described in Section M below shall be provided to the Complainant, the Respondent, any Witness and any member of the Investigation Committee, as applicable, during an Investigation.
 5. If the RIO (in consultation with the Chair(s) of the Standing Committee) or the Investigation Committee identifies additional Respondents during the Investigation, the University is not required to conduct a separate Inquiry for each new Respondent. However, each additional Respondent must be provided notice of and an opportunity to respond to the Allegation, consistent with the other requirements of this Policy.
 6. Upon completion of the Investigation, the Investigation Committee shall provide the Respondent with (a) a draft written report (the “*Investigation Report*”) of its findings and recommendations as to whether or not a finding of Research Misconduct should be made and, if so, what corrective actions would be appropriate under the circumstances and (b) a copy of, or supervised access to, the evidence on which the Investigation Report is based. The Investigation Committee shall also provide the Complainant with copies of those portions of the draft Investigation Report that are relevant to the Complainant. The Respondent and the Complainant may comment on the draft Investigation Report, provided that any such comments must be given to the Investigation Committee within 30 days of receiving such draft.
 7. Following the review by the Investigation Committee of any comments on the draft Investigation Report provided by the Respondent or the Complainant, the Investigation Committee shall provide the Standing Committee with a final Investigation Report.
 8. The Standing Committee may accept, reject or modify the recommendations of the Investigation Committee and shall promptly provide the Complainant, the Respondent, the appropriate Responsible Academic Officer, the EVPR and if applicable, the EVPHS and the Funding Agency, with written notification of its decision, indicating in such notification the principal reasons for such decision.
 9. In general, an Investigation should be completed within 180 days of its initiation, *provided* that the Standing Committee may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section K. The Adjudication Phase

1. If the Standing Committee accepts the Investigation Committee’s recommendation that a finding of Research Misconduct should be made, the EVPR shall review the reports of

the Investigation Committee and the Standing Committee and shall consult with the appropriate Responsible Academic Officer and, if the Respondent is a CUMC Respondent, the EVPHS. After such review and consultation, the EVPR may accept, reject or modify the recommendations of the Standing Committee and shall promptly provide the Complainant, the Respondent, the appropriate Responsible Academic Officer and, if applicable, the EVPHS and the Funding Agency with written notification of his/her decision, indicating in such notification the principal reasons for such decision.

2. The safeguards described in Section M below shall be provided to the Complainant, the Respondent, any Witness and any member of the Investigation Committee, as applicable, during an Adjudication.
3. In general, an Adjudication should be completed within 60 days of its initiation, provided that the EVPR may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section L. Appeal

1. A Respondent shall have the right, within 30 days after his/her receipt of the notification of the EVPR's decision with respect to an Adjudication, to file a written appeal with respect to the decision of the EVPR to the Provost of the University as to either the finding of Research Misconduct or the corrective actions imposed. The Provost may affirm, overturn or modify the decision of the EVPR. The decision of the Provost shall be final in all respects with respect to the University and the Respondent shall have no further right of appeal.
2. The Provost shall promptly provide the Complainant, the Respondent, the appropriate Responsible Academic Officer and, if applicable, the EVPHS and the Funding Agency with written notification of his/her decision, indicating in such notification the principal reasons for such decision.
3. In general, an appeal should be completed within 30 days of its filing with the Provost, provided that the Provost may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section M. Safeguards

1. **Confidentiality:** To the extent possible consistent with a fair and thorough investigation and as allowed by law, knowledge about the identity of a Complainant, a Respondent and any Witnesses shall be limited to those persons identified in this Policy and others who need to know and all written materials and information with respect to any proceedings shall be kept confidential. Those who need to know, as determined by the RIO in consultation with the Chair(s) of the Standing Committee, may include, but are not limited to, institutional review boards, journals, editors, publishers, co-authors, and collaborating institutions.
2. **Conflicts of Interest:** The Standing Committee shall take reasonable steps to ensure that all individuals responsible for carrying out any part of the administrative procedures described in this Policy do not have unresolved personal, professional or financial conflicts of interest with the Complainant, Respondent or any Witness. In extraordinary circumstances, e.g., to mitigate a potential conflict of interest, the University may, during

any phase of the research misconduct process, from Assessment through Appeal, as appropriate, utilize external resources with appropriate expertise to serve in any role called for by this Policy.

3. **Safeguards for a Complainant:** In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to a Complainant:

- If an Allegation has been made by a Complainant in Good Faith, the University shall ensure that:
 - the Complainant is treated fairly and reasonably;
 - all reasonable and practical efforts are made to protect the Complainant from potential or actual Retaliation;
 - the procedures described in this Policy are fair and objective; and
 - diligent efforts are made to protect or restore the position and reputation of the Complainant.

However, in the event that the Standing Committee determines that a Complainant has made an Allegation for malicious reasons, or was otherwise not acting in Good Faith in making such Allegation, the Committee shall recommend that appropriate action be taken against such Complainant.

- During an Inquiry, the Complainant shall have the right to meet with the Inquiry Committee.
 - During an Investigation, the Complainant shall have the right:
 - to identify persons who have information regarding any relevant aspects of the Investigation to be interviewed by the Investigation Committee;
 - to be accompanied by counsel for advisory purposes only when appearing before the Investigation Committee; and
 - to obtain a copy of a transcript of his/her own testimony, if any, and to correct such transcript, if necessary.
4. **Safeguards for a Respondent:** In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to a Respondent:
- Respondent is assumed not to have committed Research Misconduct unless and until a finding of such has been made in accordance with this Policy and should be protected from penalty and public knowledge of any accusation until judged culpable. The Respondent in turn shall cooperate with the administrative procedures described in this Policy, including by providing information, research records and evidence to the University representatives referred to herein when so requested.
 - The University shall not impede the ability of a Respondent to continue to do his/her work, and shall ensure that other disciplinary or adverse action not be taken, during the period of any Inquiry or Investigation unless the EVPR determines that there are compelling reasons to suspend the Respondent's work or take such action during all or a portion of such period.
 - During an Inquiry, the Respondent shall have the right:

- to meet with the Inquiry Committee;
 - to have reasonable access to the data and other evidence supporting the Allegation; and
 - to respond to the Allegation orally and in writing.
 - During an Investigation, the Respondent shall have the right:
 - to appear before the Investigation Committee to present testimony on his/her behalf;
 - to identify persons who have any information regarding any relevant aspects of the Investigation to be interviewed by the Investigation Committee;
 - to be accompanied by counsel for advisory purposes only when appearing before the Investigation Committee; and
 - to obtain a copy of a transcript of his/her own testimony, if any, and to correct such transcript, if necessary.
 - to obtain a copy of the transcript of each Complainant and Witness interview (but must not be present during such interviews).
 - During an Appeal, the Respondent shall have the right to review the final Investigation Report.
 - The University shall take all reasonable and practical efforts, if requested and as appropriate, to protect or restore the reputation of any Respondent against whom no finding of Research Misconduct is made.
5. **Safeguards for Witnesses:** In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to a Witness:
- During an Investigation, a Witness shall have the right:
 - to obtain a copy of a transcript of his/her own testimony, if any, and to correct such transcript, if necessary.
 - If a Witness has cooperated with a Research Misconduct proceeding in Good Faith, the University shall ensure that:
 - all reasonable and practical efforts are made to protect such Witness from potential or actual Retaliation; and
 - diligent efforts are made to protect or restore the position and reputation of such Witness.
6. **Safeguards for Committee Members:** In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to members of the Standing Committee and any Inquiry or Investigation Committee:
- The University shall ensure that:
 - all reasonable and practical efforts are made to protect a member of the Standing Committee and any Inquiry or Investigation Committee from potential or actual Retaliation; and
 - diligent efforts are made to protect or restore the position and reputation of Committee member.

7. **Guarantees:** If, as a result of a finding of Research Misconduct, a Respondent with whom a Complainant or Witness works loses funding for his/her research, the University will guarantee the salary, stipend or tuition of the Complainant or Witness, as follows:

- Officers of Instruction: salary in accordance with University statutory provisions;
- Officers of Research: salary or stipend until the later of (x) the last day of the Complainant's or Witness' then current appointment period and (y) the date that is six months after the last day on which the Complainant or Witness was paid from the terminated funding (the "Six-Month Date");
- Other Officers and members of the support staff: salary until the Six-Month Date; and
- Students enrolled in pursuit of a degree: stipend and tuition in accordance with the commitment made to the student by his/her School, subject to the student remaining in good academic standing; provided that any such guarantee will terminate when the Complainant or Witness receives funding from an alternate source or accepts an offer of other employment

8. **Corrective Actions and Penalties.**

- The purpose of the procedures described in this Policy is remedial. The corrective actions with respect to any finding of Research Misconduct shall be commensurate with the seriousness of the Research Misconduct, including, without limitation, the degree to which the Research Misconduct was knowing, intentional or reckless; was an isolated event or part of a pattern; or had significant impact on the Research Record, Research subjects, other researchers, the University, other institutions or the public.
- No penalty involving dismissal from the University or other serious sanction may become effective except in accordance with the provisions of the University's Code of Academic Freedom and Tenure.

Section N. Notification to Funding Agency and Others

1. In addition to the notices to any Funding Agency provided for in Sections J, K, and L above, the EVPR shall, during the course of any phase of the administrative procedures provided for in this Policy with respect to an Allegation, notify the Funding Agency if any of the following events shall occur with respect to Research funded by such Funding Agency:

- if public health or safety is at risk;
- if the resources or interests of such Funding Agency are threatened;
- if research activities should be suspended;
- if there is reasonable indication of possible violations of civil or criminal law;
- if federal action is requested to protect the interests of those involved in the investigation;

- if the EVPR believes that the administrative processes may be made public prematurely, so that appropriate steps may be taken to safeguard evidence and protect the rights of those involved; or
 - if the research community or the public should be informed.
2. Upon the completion of the administrative procedures provided for in this Policy, if there has been a finding of Research Misconduct, notification of such will be given to journals and societies to which erroneous, inaccurate or fraudulent papers or abstracts have been submitted, and to past and present collaborating investigators and other institutions and research agencies with which the Respondent is or was previously affiliated to the extent deemed appropriate by the Standing Committee.

Annex A

Terms Applicable to Research Funded by the Public Health Service of the U.S. Department of Health and Human Services.

This Annex sets forth additional provisions from the PHS Final Rule.

Section A. Definitions

For purposes of this Annex, the following terms have the meanings set forth below:

“Accepted practices of the relevant research community”: those practices established by 42 CFR part 93 and by PHS funding components, as well as commonly accepted professional codes or norms within the overarching community of researchers and institutions that apply for and receive PHS awards.

“PHS Research”: (i) Applications or proposals for PHS support for biomedical or behavioral extramural or intramural research, biomedical or behavioral research training, or activities related to that research or research training; (ii) PHS-supported biomedical or behavioral extramural or intramural research; (iii) PHS-supported biomedical or behavioral extramural or intramural research training programs; (iv) PHS-supported extramural or intramural activities that are related to biomedical or behavioral research or research training, such as, but not limited to, the operation of tissue and data banks or the dissemination of research information; (v) Research records produced during PHS-supported research, research training or activities related to that research or research training; and Research proposed, performed, reviewed, or reported, as well as any research record generated from that research, regardless of whether an application or proposal for PHS funds resulted in an awarded grant, contract, cooperative agreement, subaward, or other form of PHS support.

Section B. The Inquiry Phase

1. The Inquiry Report must include the following information:
 - The names, professional aliases, and positions of the Respondent and Complainant(s).
 - A description of the allegation(s) of research misconduct.

- Details about the PHS funding, including any grant numbers, grant applications, contracts, and publications listing PHS support.
- The composition of the Inquiry Committee, if used, including name(s), position(s), and subject matter expertise.
- An inventory of sequestered research records and other evidence and description of how sequestration was conducted.
- Transcripts of interviews, if transcribed.
- Inquiry timeline and procedural history.
- Any scientific or forensic analyses conducted.
- The basis for recommending that the allegation(s) warrant an investigation.
- The basis on which any allegation(s) do not merit further investigation.
- Any comments on the Inquiry Report by the Respondent or the Complainant(s).
- Any institutional actions implemented, including internal communications or external communications with journals or funding agencies.
- Documentation of potential evidence of honest error or difference of opinion.

Section C. The Investigation Phase

1. An Investigation must be initiated within 30 days after the Standing Committee's determination that an Investigation is warranted.
2. Interviews: The Investigation Committee must interview each Respondent, Complainant, and any other available person who has been reasonably identified as having information regarding any relevant aspects of the Investigation, including witnesses identified by the Respondent, and record or transcribe each interview, provide the recording or transcript to the interviewee for correction, and include the recording or transcript in the record of the investigation.
 - Interviews during the investigation must be recorded and transcribed.
 - Any exhibits shown to the interviewee during the interview must be numbered and referred to by that number in the interview.
 - The transcript of the interview must be made available to the relevant interviewee for correction.
 - The transcript(s) with any corrections and numbered exhibits must be included in the institutional record of the Investigation.
 - The respondent must not be present during the witnesses' interviews but must be provided a transcript of the interview.

3. The final Investigation Report must include the following information:

- a description of the nature of the allegation(s) of Research Misconduct; including any additional allegation(s) addressed during the research misconduct proceeding.
- a description and documentation of the PHS support, including, for example, any grant numbers, grant application, contracts and publications listing PHS support;
- a description of the specific Allegations of Research Misconduct for consideration in the Investigation;
- composition of the Investigation Committee, including name(s), position(s), and subject matter expertise.
- inventory of sequestered research records and other evidence, except records the institution did not consider or rely on; and a description of how any sequestration was conducted during the investigation. This inventory must include manuscripts and funding proposals that were considered or relied on during the Investigation.
- transcripts of all interviews conducted.
- identification of the specific published papers, manuscripts submitted but not accepted for publication (including online publication), PHS funding applications, progress reports, presentations, posters, or other research records that allegedly contained the falsified, fabricated, or plagiarized material.
- any scientific or forensic analyses conducted. if not already provided to ORI, a copy of this Policy;
- any comments made by the Respondent and Complainant on the draft Investigation Report and the Investigation Committee's consideration of those comments.
- a statement for each separate allegation of whether the Investigation Committee recommends a finding of research misconduct.
- if the Investigation Committee recommends a finding of Research Misconduct for an allegation, the Investigation Report must, for that allegation:
 - identify the individual(s) who committed the research misconduct.
 - Indicate whether the Research Misconduct was Falsification, Fabrication and/or Plagiarism.
 - indicate whether the research misconduct was committed intentionally, knowingly, or recklessly.
 - state whether there was a significant departure from accepted practices of the relevant research community and whether the allegation was proven by a preponderance of the evidence.

- summarize the facts and the analysis which support the conclusion and consider the merits of any explanation by the Respondent.
 - identify the specific PHS support.
 - identify whether any publications need correction or retraction.
- if the Investigation Committee does not recommend a finding of Research Misconduct for an allegation, the Investigation Report must provide a detailed rationale.
- a list of any current support or known applications or proposals for support that the Respondent has pending with PHS and non-PHS Federal agencies.

Section D. Record Retention and Submission

1. The University must maintain the institutional record and all sequestered evidence including physical objects (regardless of whether the evidence is part of the institutional record) in a secure manner for seven years after completion of the proceeding or the completion of any HHS proceeding involving the research misconduct allegation under subparts D and E of this part, whichever is later, unless custody has been transferred to HHS under 42 C.F.R. Sec. 93.317(c) paragraph (b) of this section or ORI advises otherwise in writing.
2. On request, the University must transfer custody, or provide copies, to HHS of the institutional record or any component of the institutional record and any sequestered evidence (regardless of whether the evidence is included in the institutional record) for ORI to conduct its oversight review, develop the administrative record, or present the administrative record in any proceeding under 42 C.F.R. Sec. 93, Subparts D and E.

What you Need to Know about Research Misconduct



Columbia ReadI
Program

What IS Research Misconduct?

Fabrication – making up data or results, and recording or reporting them

Falsification – manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record

Plagiarism – the appropriation of another person's ideas, processes, results, or words without giving appropriate credit. It does not include the limited use of identical or nearly identical phrases that describe a commonly used methodology.

References:

<https://ori.hhs.gov/definition-misconduct>

<http://www.columbia.edu/cu/vpaa/handbook/appendixc.html>

Safeguards

As outlined in Columbia University's Institutional Policy on Misconduct in Research, all parties must be treated fairly and reasonably. To the extent possible, knowledge about the identity of parties is limited to those who need to know and all materials and information shall be kept confidential.

Based upon Columbia University's Institutional Policy on Misconduct in Research. <http://www.columbia.edu/cu/vpaa/handbook/appendixc.html>

What is NOT Research Misconduct?

- **Honest Error**
- **Difference of opinion**
- **Self-Plagiarism and**
- **Authorship or credit disputes**
- **Questionable research practices***

*Can still affect the integrity and quality of research

Who can Report Research Misconduct?

Anybody! Columbia has policies, protections and resources available for reporting research misconduct in good faith.

Where can Research Misconduct Occur?

Publications, presentations, posters, funding applications (funded or unfunded), theses, other reports of research results (including internal reports).

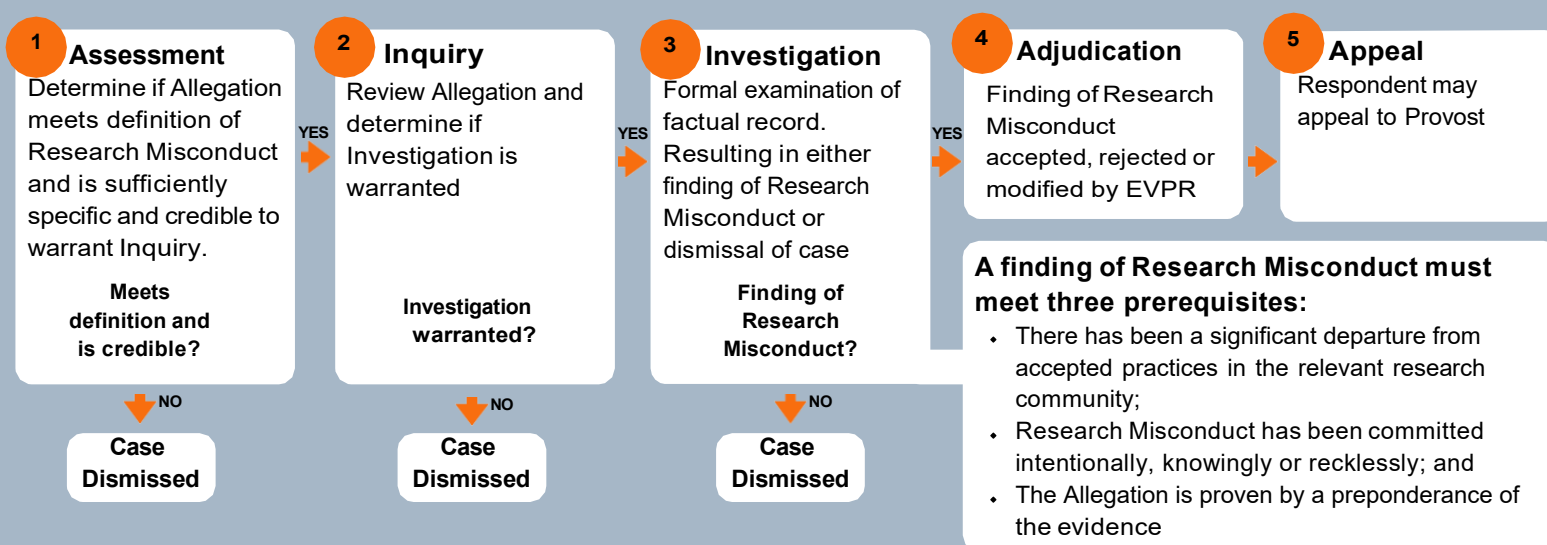
Who is Affected by Research Misconduct?

Everyone! research team, institution, research community, the public (taxpayers, patients), the overall credibility of research enterprise.

Roles

- **Standing Committee on the Conduct of Research:** EVPR-appointed standing committee that oversees research misconduct process
- **Ad Hoc Committees:** Appointed by Standing Committee to conduct Inquiries and Investigations
- **Office of Research Compliance and Training:** Staff all committees; support process
- **Research Integrity Officer:** Institutional official responsible for compliance with federal research misconduct regulations

Key Stages Following Formal Allegation



Office of Research Compliance & Training
<https://researchcompliance.columbia.edu>

24/7 Confidential Compliance Hotline
<https://compliance.columbia.edu/hotline>
866-627-3768

Ombuds Office
<https://ombuds.columbia.edu/>

Research Misconduct Definitions



Columbia ReadI
Program

“Allegation” - a disclosure of possible Research Misconduct through any means of communication and **brought directly to the attention of an Institutional Official.**

“Fabrication” - the making up of data or results and the recording or reporting thereof.

“Falsification” - the manipulation of Research materials, equipment or processes, or the change or omission of data or results such that the Research is not accurately represented in the Research Record.

“Institutional Official” - the President, Executive Vice Presidents, the Provost and vice provosts, vice presidents, other senior officers, **deans and vice-deans, associate deans, department chairs, division chiefs, and institute and center directors,** but excluding any member of the Ombuds office.

“Intentionally” - to act intentionally means to act with the aim of carrying out the act.

“Knowingly” - to act knowingly means to act with awareness of the act.

“Plagiarism” - the appropriation of another person’s ideas, processes, results or words without giving appropriate credit. Plagiarism includes the unattributed verbatim or nearly verbatim copying of sentences and paragraphs from another’s work that materially misleads the reader regarding the contributions of the author. It does not include the limited use of identical or nearly identical phrases that describe a commonly used methodology. Plagiarism also does not include self-plagiarism or authorship or credit disputes, including disputes among former collaborators who participated jointly in the development or conduct of a research project. Self-plagiarism and authorship disputes do not meet the definition of Research Misconduct.

“Recklessly” - to act recklessly means to propose, perform, or review research, or report research results, with indifference to a known risk of fabrication, falsification, or plagiarism.

Green = new language from revised Policy; see also 42 C.F.R. Part 93.200 et seq.

Appendix I. Columbia University Institutional Policy on Misconduct in Research

The Columbia University Institutional Policy on Misconduct in Research was adopted by the University Senate on February 3, 2006, and revised on , 2025.

Section A. Introduction

Columbia is committed to upholding the highest standards of scientific rigor in research. The University is committed to fostering an environment that promotes research integrity and the responsible conduct of research, discourages research misconduct, and deals promptly with allegations or evidence of possible research misconduct.

All individuals conducting research under the auspices of Columbia are expected to conduct research with honesty, rigor, and transparency. Each such individual is responsible for contributing to an organizational culture that establishes, maintains, and promotes research integrity and the responsible conduct of research.

Columbia University believes that the occurrence of research misconduct is a threat to the basic principles of research. Misconduct in research damages the integrity of the profession and undermines the credibility of scholars. It is also antithetical to the values the University strives to maintain and promote.

The University takes seriously all allegations of research misconduct, and believes that the procedures for the assessment, inquiry, investigation and adjudication of any research misconduct concern should be clear for all parties involved. The University is also cognizant of the need for protections for the complainant, the respondent and all witnesses involved in any research misconduct proceeding. This Policy is designed to address both of these issues.

~~Definitions~~Allegations of ~~certain key terms used~~research misconduct shall be addressed in accordance with this Policy ~~are provided in Section B below.~~

and applicable regulations and policies. This Policy is based on the Federal Policy on Research Misconduct (the “OSTP Policy”) of the Office of Science and Technology Policy-, with revisions added based on the Public Health Service Policies on Research Misconduct (the “PHS Final Rule”), codified at 42 CFR 93, applicable on January 1, 2026. In accordance with the OSTP Policy, ~~as used in this Policy and the definitions below,~~ “Research Misconduct” means any Fabrication, Falsification or Plagiarism in proposing, performing or reviewing Research or reporting Research results. Research Misconduct does not include honest error or differences of opinion. ~~In addition, this Policy does not cover authorship disputes unless they involve Plagiarism.~~

This is a University-wide Policy which applies to all individuals conducting research under the auspices of the University, including Officers of Instruction, Officers of Research, Officers of the Libraries, students and members of the research staff, who may be involved in research at the University and all Research conducted by such individuals, whether or not federally funded, and proposals for such Research, other than Research undertaken in fulfillment of a course requirement (unless there is an expectation of publication or dissemination outside the

University of the results of such Research). This Policy applies to such Research even if the individual who conducted such Research is no longer affiliated with the University.

Section B. Definitions

“Allegation”: a disclosure of possible Research Misconduct through any means of communication and brought directly to the attention of an Institutional Official.

“Complainant”: the individual bringing an ~~allegation~~Allegation of Research Misconduct.

“Fabrication”: the making up of data or results and the recording or reporting thereof.

“Falsification”: the manipulation of Research materials, equipment or processes, or the change or omission of data or results such that the Research is not accurately represented in the Research Record.

“Good Faith”: as applied to a Complainant, Respondent or Witness, includes having a belief in the truth of one’s Allegation or testimony that a reasonable person in any of these roles could have, based on the information known to the Complainant, Respondent or Witness at the time. An Allegation of or cooperation with a Research Misconduct proceeding is not in good faith if made with ~~knowing~~knowledge of or reckless disregard for information that would negate the Allegation or testimony. Good ~~faith~~Faith as applied to a member of the Standing Committee or any ~~Ad Hoc Inquiry or Investigation Committee or a Preliminary Reviewer~~ includes cooperating with the Research Misconduct proceeding by carrying out the duties assigned impartially for the purpose of helping the University meet its responsibilities under this Policy. A member of the Standing Committee or any Ad Hoc Inquiry or Investigation Committee ~~or a Preliminary Reviewer~~ does not act in ~~good faith~~Good Faith if his/her acts or omissions during the Research Misconduct proceedings are dishonest or influenced by personal, professional or financial conflicts of interest with those involved in the Research Misconduct proceeding.

“Institutional Official”: the President, Executive Vice Presidents, the Provost and vice provosts, vice presidents, other senior officers, deans and vice-deans, associate deans, department chairs, division chiefs, and institute and center directors, but excluding any member of the Ombuds office.

“Intentionally”: To act intentionally means to act with the aim of carrying out the act.

“Knowingly”: To act knowingly means to act with awareness of the act.

“Plagiarism”: the appropriation of another person’s ideas, processes, results or words without giving appropriate credit. Plagiarism includes the unattributed verbatim or nearly verbatim copying of sentences and paragraphs from another’s work that materially misleads the reader regarding the contributions of the author. It does not include the limited use of identical or nearly identical phrases that describe a commonly used methodology. Plagiarism also does not include self-plagiarism or authorship or credit disputes, including disputes among former collaborators who participated jointly in the development or conduct of a research project. Self-plagiarism and authorship disputes do not meet the definition of Research Misconduct.

“Preponderance of the Evidence”: proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not.

~~“Research”: all basic, applied and demonstration research in all fields of knowledge.~~

~~“Recklessly”: To act recklessly means to propose, perform, or review research, or report research results, with indifference to a known risk of fabrication, falsification, or plagiarism.~~

~~“Research”: any systematic experiment, study, evaluation, demonstration, survey, or creative activity designed to develop or contribute to general knowledge (basic research) or specific knowledge (applied research) by establishing, discovering, developing, elucidating, or confirming information. This applies to all fields of scholarly study, including but not limited to all fields of science, mathematics, engineering, arts, and the humanities.~~

~~“Research Misconduct”: Fabrication, Falsification, or Plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research Misconduct does not include honest error or differences of opinion.~~

“Research Record”: the record of data or results that embody the facts resulting from the research inquiry, including, without limitation, research proposals, laboratory records, both physical and electronic, progress reports, abstracts, theses, oral presentations, internal reports and journal articles.

“Respondent”: the individual who is the subject of an ~~allegation of Research Misconduct~~Allegation.

“Responsible Academic Officer”: with respect to any Respondent, the Chair, Dean or Director of the Department, School, Institute, Center or equivalent unit at the University of which such Respondent is a member.

~~“Retaliation”: an adverse action taken against a Complainant, Witness, or Committee member by the University or one of its members in response to a Good Faith allegation of research misconduct, or Good Faith cooperation with a research misconduct proceeding.~~

“Witness”: any individual who testifies or provides information with regard to an Allegation or whose Research Record is used as evidence during the course of a Research Misconduct proceeding.

Section C. Compliance with Laws, Regulations and Policies

The administrative procedures to be followed by the University pursuant to this Policy are, in all cases, subject to the requirements of law. The University will comply with all applicable federal and state laws, regulations and policies with respect to Research Misconduct.

~~All federal agencies that conduct or support research have been directed to implement the OSTP Policy. To the extent that any Research that is subject to allegations of Research Misconduct an Allegation was supported by, or is proposed to be supported by, any federal agency that has not implemented the OSTP Policy, or the terms of this Policy whose Research Misconduct regulations and policies are inconsistent with this Policy, the terms of such agency's policy, the terms of such agency's policy Research Misconduct regulations and policies shall apply to the administrative processes described herein. Such other terms, if any, will may be described in Annexes to this Policy, as amended from time to time.~~

Section D. The Committee on the Conduct of Research and the Research Integrity Officer

1. The University has formed a special standing committee of Officers of Instruction, Officers of Research, Officers of the Libraries (collectively, the “*Officers*”) and students designated The Committee on the Conduct of Research (the “*Standing Committee*”) which will be responsible for setting and communicating standards with respect to Research Misconduct and overseeing the administrative procedures relating to the review of any allegation of Research Misconduct.
2. The members of the Standing Committee will be appointed by the Executive Vice President for Research (the “*EVPR*”). The Standing Committee shall have at least eleven members, at least five of whom shall be selected from the Officers and students at the Columbia University Medical Center (“*CUMC*”) and at least five of whom shall be selected from the Officers and students of the University other than those at CUMC. The Standing Committee shall include at least one Officer of Research at CUMC, one Officer of Research at a campus of the University other than CUMC, one Officer of the Libraries and one student involved in Research at the University. The EVPR shall appoint at least one of the members as Chair of the Standing Committee. The Standing Committee members shall have staggered four-year terms which may be renewable.
3. The safeguards described in Section KM below shall be provided to the members of the Standing Committee, as applicable.

The Making of an Allegation

4. The EVPR will appoint the head of the Office of Research Compliance and Training to serve as the University’s Research Integrity Officer (“*Research Integrity Officer*” or “*RIO*”). The RIO will be responsible for administering the University’s written policies and procedures for addressing allegations of research misconduct, in collaboration and consultation with the Standing Committee.
5. Any individual who has questions with respect to possible the Research Misconduct or who is considering making an allegation of Research Misconduct Policy may privately meet with the RIO and/or any member of the Standing Committee, to discuss such questions.

Section E. The Making of an Allegation

1. An Allegation may be communicated through any other Officer of Instruction, Officer of Research or Officer of the Libraries or any Officer in the Office of Research Administration or a University Ombuds Officer for advice or to discuss such questions. -means to (a) the RIO, or (b) to another Institutional Official, who must promptly transmit such Allegation to the RIO for an Assessment.
1. The University encourages reasonable efforts to be made to resolve issues of alleged Research Misconduct prior to the commencement of formal administrative procedures pursuant to this Policy. If an individual believes that there are grounds for making an allegation of Research Misconduct, such individual may initially so notify the appropriate Responsible Academic Officer,

~~who will use his or her good faith efforts to resolve such individual's concerns informally. The administrative procedures described in this Policy shall not be applicable to any such informal process.~~

- ~~2. In the event that the concerns of any individual are not resolved informally to the satisfaction of such individual, such individual may make a formal allegation of Research Misconduct (an "Allegation"). Any Allegation shall be made in writing and delivered to the Chair of the Standing Committee or the EVPR.~~

2. ~~An allegation of Research Misconduct~~An Allegation may have profound implications for the Complainant, the Respondent and any Witness in a Research Misconduct proceeding and any individual making an ~~allegation of Research Misconduct~~Allegation should take great care in ~~documenting~~providing the basis of any charge.

Section F. Institutional Response to an Allegation of Research Misconduct; **Prerequisites for Finding of Research Misconduct**

1. ~~A~~The University's response to an Allegation shall consist of ~~three~~up to five phases:
 - **Assessment:** a consideration, through review of readily accessible information relevant to such Allegation, of whether such Allegation appears to fall within the definition of Research Misconduct, and is sufficiently credible and specific so that potential evidence of research misconduct may be identified (an "Assessment");
 - **Inquiry:** the gathering of preliminary information and fact-finding to assess whether such Allegation has substance and if so, whether an Investigation is warranted (an "Inquiry");
 - **Investigation:** the formal development of a factual record with respect to such Allegation and the examination and evaluation of such record leading to dismissal of the case or a recommendation of a finding of Research Misconduct and/or other appropriate corrective actions (an "Investigation"); and
 - **Adjudication:** the formal procedure for reviewing and evaluating the evidentiary record and report of an Investigation and for determining whether to agree with the recommended findings and to impose appropriate corrective actions (an "Adjudication").
 - **Appeal:** the formal procedure for determining whether to affirm, overturn, or modify the Adjudication (an "Appeal").
2. It is expected that the Complainant, the Respondent and any other person involved in the administrative procedures described in this Policy will act in Good Faith in participating in such procedures.

Section G. Prerequisites for Finding of Research Misconduct

1. A finding of Research Misconduct requires the satisfaction of all of the following prerequisites:
 - there has been a significant departure from accepted practices in the relevant research community;

- the Research Misconduct has been committed ~~intentionally, knowingly or recklessly~~Intentionally, Knowingly or Recklessly; and
- the Allegation is proven by a Preponderance of the Evidence.
~~It is expected that~~

2. Time Limits: This Policy applies only to Research Misconduct occurring within six years of the Complainant, date the University receives an Allegation, except under either of the following conditions:

- Subsequent use exception: The Respondent and any continues or renews any incident of alleged research misconduct that occurred before the six-year limitation through the use of, republication of, or citation to the portion(s) of the research record (e.g., processed data, journal articles, funding proposals, data repositories) alleged to have been fabricated, falsified, or plagiarized, for the potential benefit of the Respondent.
 - When the Respondent uses, republishes, or cites to the portion(s) of the research record that is alleged to have been fabricated, falsified, or plagiarized, in submitted or published manuscripts, submitted grant applications, progress reports submitted to funding agencies, posters, presentations, or other person involved in the administrative procedures described in research records within six years of when the Allegation was received by the University, this Policy will act in good faith in participating in exception applies.
- Exception for the health or safety of the public: If the University (in consultation with a funding agency, where required) determines that the alleged Research Misconduct, if it occurred, would possibly have a substantial adverse effect on the health or safety of the public, this exception applies.

Section H. The Assessment Phase

1. An Institutional Official who receives an Allegation must promptly transmit such procedures. Allegation to the RIO for an Assessment.
2. The RIO, in consultation with the Chair(s) of the Standing Committee, and/or other relevant experts, is responsible for promptly conducting the Assessment.
3. Conducting the Assessment must include a determination whether the Allegation (a) falls within the definition of Research Misconduct, including the time limits provisions of this Policy, and (b) is sufficiently credible and specific so that potential evidence of research misconduct may be identified. If both criteria are met, an Inquiry is warranted. The Assessment only involves the review of readily accessible information relevant to the Allegation.
4. The RIO must keep sufficiently detailed documentation of the Assessment to permit a later review by the Standing Committee and any relevant sponsor of the reasons why an Inquiry was or was not warranted.
5. Should the Assessment conclude that Allegation does not appear to fall within the definition of Research Misconduct, but raises other potential compliance concerns, it should be referred to the appropriate office or individual for review. If the matter does not

raise compliance concerns, it may be resolved informally by the Responsible Academic Officer and others who may be appropriate.

Section I. The Inquiry Phase

1. ~~Upon receipt~~If, at the conclusion of an ~~Allegation~~Assessment, the RIO determines that an Inquiry is warranted, the Chair(s) of the Standing Committee shall (a) notify (i) the Complainant, (ii) the Respondent, (iii) the appropriate Responsible Academic Officer and (iv) if the Allegation involves a Respondent who is an Officer of Instruction, Officer of Research, Officer of the Libraries, student or member of the research staff at CUMC (a "CUMC Respondent"), the Executive Vice President for Health Sciences (the "EVPHS") of the filing of the Allegation and the sources thereof and (b) in consultation with members of the Standing Committee, select three or more persons who are Officers of Instruction, Officers of Research, Officers of the Libraries or students (the "~~Preliminary Reviewers~~Inquiry Committee"), who may or may not be members of the Standing Committee, to assess the Allegation. In selecting the ~~Preliminary Reviewers~~members of the Inquiry Committee, the Chair(s) of the Standing Committee should consider appointing a representative of the Complainant's and/or the Respondent's peer group. ~~If the Inquiry subsequently identifies additional Respondents, the Chair of the Standing Committee shall so notify them.~~
-
2. On or before the date on which a Respondent is notified of the filing of an Allegation against him/her and at any other time during the Research Misconduct proceeding when additional records or evidence are discovered, the Standing Committee shall promptly take all reasonable and practical steps to obtain custody of all of the Research Record and evidence needed to conduct the Research Misconduct proceeding, inventory the Research Record and evidence, and sequester them in a secure manner, except that where the Research Record or evidence encompasses scientific instruments shared by a number of users, custody may be limited to copies of the data or evidence on such instruments, so long as those copies are substantially equivalent to the evidentiary value of the instruments.
3. The ~~Preliminary Reviewers~~Inquiry Committee shall review such evidence and interview such persons as may be necessary to make an assessment of whether the Allegation has substance and whether an Investigation is warranted.
4. If the RIO (in consultation with the Chair(s) of the Standing Committee) or the Inquiry Committee identifies additional Respondents during the Inquiry, the University is not required to conduct a separate Inquiry for each new Respondent. However, each additional Respondent must be provided notice of and an opportunity to respond to the Allegation, consistent with the other requirements of this Policy.
- 4.5. The safeguards described in Section ~~KM~~ below shall be provided to the Complainant, the Respondent, any Witness and any ~~Preliminary Reviewer~~Inquiry Committee member, as applicable, during the Inquiry.
- 5.6. Upon completion of the Inquiry, the ~~Preliminary Reviewers~~Inquiry Committee shall provide the Respondent with a draft written report (the "Inquiry Report") of ~~their~~its findings and recommendation as to whether or not ~~there is sufficient evidence to undertake an Investigation~~is warranted. The ~~Preliminary Reviewers~~Inquiry Committee shall also provide

the Complainant with copies of those portions of the Inquiry Report relevant to the Complainant. The Respondent and the Complainant may comment on the draft Inquiry Report.

~~6-7.~~ Following the review by the ~~Preliminary Reviewers~~ Inquiry Committee of any comments on the draft Inquiry Report provided by the Respondent or the Complainant, the ~~Preliminary Reviewers~~ Inquiry Committee shall provide the Standing Committee with a final Inquiry Report.

~~7-8.~~ The Standing Committee may accept or reject the recommendation of the ~~Preliminary Reviewers~~ Inquiry Committee and shall promptly provide the Complainant, the Respondent and the appropriate Responsible Academic Officer with written notification of its decision, indicating in such notification the principal reasons for such decision and a copy of the final Inquiry Report.

~~8-9.~~ In general, an Inquiry should be completed within ~~60~~90 days of its initiation, provided that the Standing Committee may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section J. The Investigation Phase

1. If, at the conclusion of an Inquiry, the Standing Committee determines that an Investigation is warranted, the Chair(s) of the Standing Committee ~~Columbia University Institutional Policy on Misconduct in Research~~ shall so notify, in addition to the persons listed in Section ~~G-6I.8~~ above, (a) the EVPR, (b) if the Allegation involves a CUMC Respondent, the EVPHS, and (c) if the Allegation involves federally funded research (or an application for federal funding), the applicable funding agency or agencies (collectively, the “*Funding Agency*”)-~~”) in accordance with Funding Agency requirements~~
2. The Standing Committee shall appoint ~~an ad hoc a~~ committee (the “*Ad Hoc Investigation Committee*”) to conduct the Investigation, which shall consist of at least three members, none of whom is a member of the Standing Committee or served as a ~~Preliminary Reviewer~~ member of the Inquiry Committee with respect to the Allegation relating to such Investigation and at least one of whom is an expert in the area of research that is the subject of such Investigation. In constituting the Ad Hoc Investigation Committee, the Standing Committee shall select as members those persons who have the expertise pertinent to the matter and who will carry out the Investigation thoroughly, fairly and promptly and should consider appointing a representative of the Respondent’s or the Complainant’s peer group. The Standing Committee may appoint a person who is not affiliated with the University to the Ad Hoc Investigation Committee if such person has the requisite expertise. The Standing Committee shall select one of the members as the Chair of the Ad Hoc Investigation Committee.
3. The Ad Hoc Investigation Committee shall:
 - use diligent efforts to ensure that the Investigation is thorough and sufficiently documented and includes the examination of all Research records and evidence relevant to reaching a decision on the merits of the Allegation;
 - take reasonable steps to ensure an impartial and unbiased Investigation to the maximum extent practicable;

- interview the Complainant, the Respondent and any other available person who has been reasonably identified as having information regarding any relevant aspects of the Investigation; and
 - pursue diligently all significant issues and leads discovered that are relevant to the Investigation.
4. The safeguards described in Section ~~K~~M below shall be provided to the Complainant, the Respondent, any Witness and any member of the Ad-Hoc-Investigation Committee, as applicable, during an Investigation.
5. If the RIO (in consultation with the Chair(s) of the Standing Committee) or the Investigation Committee identifies additional Respondents during the Investigation, the University is not required to conduct a separate Inquiry for each new Respondent. However, each additional Respondent must be provided notice of and an opportunity to respond to the Allegation, consistent with the other requirements of this Policy.
- 5-6. Upon completion of the Investigation, the Ad-Hoc-Investigation Committee shall provide the Respondent with (a) a draft written report (the “*Investigation Report*”) of its findings and recommendations as to whether or not a finding of Research Misconduct should be made and, if so, what corrective actions would be appropriate under the circumstances and (b) a copy of, or supervised access to, the evidence on which the Investigation Report is based. The Ad-Hoc-Investigation Committee shall also provide the Complainant with copies of those portions of the draft Investigation Report that are relevant to the Complainant. The Respondent and the Complainant may comment on the draft Investigation Report, provided that any such comments must be given to the Ad-Hoc-Investigation Committee within 30 days of receiving such draft.
- 6-7. Following the review by the Ad-Hoc-Investigation Committee of any comments on the draft Investigation Report provided by the Respondent or the Complainant, the ~~Ad-Hoc-Investigation~~ Committee shall provide the Standing Committee with a final Investigation Report.
- 7-8. The Standing Committee may accept, reject or modify the recommendations of the Ad-Hoc-Investigation Committee and shall promptly provide the Complainant, the Respondent, the appropriate Responsible Academic Officer, the EVPR and if applicable, the EVPHS and the Funding Agency, with written notification of its decision, indicating in such notification the principal reasons for such decision.
- 8-9. In general, an Investigation should be completed within ~~420~~180 days of its initiation, *provided* that the Standing Committee may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section K. The Adjudication Phase

1. If the Standing Committee accepts the Ad-Hoc-Investigation Committee’s recommendation that a finding of Research Misconduct should be made, the EVPR shall review the reports of the Ad-Hoc-Investigation Committee and the Standing Committee and shall consult with the appropriate Responsible Academic Officer and, if the Respondent is a CUMC Respondent, the EVPHS. After such review and consultation, the EVPR may accept, reject or modify the recommendations of the Standing Committee and shall promptly provide the Complainant, the Respondent, the appropriate Responsible Academic Officer and, if

applicable, the EVPHS and the Funding Agency with written notification of his/her decision, indicating in such notification the principal reasons for such decision.

2. The safeguards described in Section ~~K~~M below shall be provided to the Complainant, the Respondent, any Witness and any member of the ~~Ad Hoc~~ Investigation Committee, as applicable, during an Adjudication.
3. In general, an Adjudication should be completed within 60 days of its initiation, provided that the EVPR may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section L. Appeal

1. A Respondent shall have the right, within 30 days after his/her receipt of the notification of the EVPR's decision with respect to an Adjudication, to file a written appeal with respect to the decision of the EVPR to the Provost of the University as to either the finding of Research Misconduct or the corrective actions imposed. The Provost may affirm, overturn or modify the decision of the EVPR. The decision of the Provost shall be final in all respects with respect to the University and the Respondent shall have no further right of appeal.
2. The Provost shall promptly provide the Complainant, the Respondent, the appropriate Responsible Academic Officer and, if applicable, the EVPHS and the Funding Agency with written notification of his/her decision, indicating in such notification the principal reasons for such decision.
3. In general, an appeal should be completed within 30 days of its filing with the Provost, provided that the Provost may approve one or more reasonable extensions to the extent deemed necessary or appropriate.

Section M. Safeguards

1. **Confidentiality:** To the extent possible consistent with a fair and thorough investigation and as allowed by law, knowledge about the identity of a Complainant, a Respondent and any Witnesses shall be limited to those persons identified in this Policy and others who need to know and all written materials and information with respect to any proceedings shall be kept confidential. Those who need to know, as determined by the RIO in consultation with the Chair(s) of the Standing Committee, may include, but are not limited to, institutional review boards, journals, editors, publishers, co-authors, and collaborating institutions.
2. **Conflicts of Interest:** The Standing Committee shall take reasonable steps to ensure that all individuals responsible for carrying out any part of the administrative procedures described in this Policy do not have unresolved personal, professional or financial conflicts of interest with the Complainant, Respondent or any Witness. In extraordinary circumstances, e.g., to mitigate a potential conflict of interest, the University may, during any phase of the research misconduct process, from Assessment through Appeal, as appropriate, utilize external resources with appropriate expertise to serve in any role called for by this Policy.

3. **Safeguards for a Complainant:** In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to a Complainant:

- If an Allegation has been made by a Complainant in ~~good faith~~Good Faith, the University shall ensure that:
 - the Complainant is treated fairly and reasonably;
 - all reasonable and practical efforts are made to protect the Complainant from potential or actual ~~retaliation~~Retaliation;
 - the procedures described in this Policy are fair and objective; and
 - diligent efforts are made to protect or restore the position and reputation of the Complainant.

However, in the event that the Standing Committee determines that a Complainant has made an Allegation for malicious reasons, or was otherwise not acting in ~~good faith~~Good Faith in making such Allegation, the Committee shall recommend that appropriate action be taken against such Complainant.

- During an Inquiry, the Complainant shall have the right to meet with the ~~Preliminary Reviewers~~
~~-Inquiry Committee~~.
- During an Investigation, the Complainant shall have the right:
 - to identify persons who have information regarding any relevant aspects of the Investigation to be interviewed by the ~~Ad Hoc~~Investigation Committee;
 - to be accompanied by counsel for advisory purposes only when appearing before the ~~Ad Hoc~~Investigation Committee; and
 - to obtain a copy of a transcript of his/her own testimony, if any, and to correct such transcript, if necessary.

4. **Safeguards for a Respondent:** In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to a Respondent:

- Respondent is assumed not to have committed Research Misconduct unless and until a finding of such has been made in accordance with this Policy and should be protected from penalty and public knowledge of any accusation until judged culpable. The Respondent in turn shall cooperate with the administrative procedures described in this Policy, including by providing information, research records and evidence to the University representatives referred to herein when so requested.
- The University shall not impede the ability of a Respondent to continue to do his/her work, and shall ensure that other disciplinary or adverse action not be taken, during the period of any Inquiry or Investigation unless the EVPR determines that there are compelling reasons to suspend the Respondent's work or take such action during all or a portion of such period.
- During an Inquiry, the Respondent shall have the right:
 - to meet with the ~~Preliminary Reviewers~~Inquiry Committee;

- to have reasonable access to the data and other evidence supporting the Allegation; and
- to respond to the Allegation orally and in writing.
- During an Investigation, the Respondent shall have the right:
 - to appear before the ~~Ad Hoc~~Investigation Committee to present testimony on his/her behalf;
 - to identify persons who have any information regarding any relevant aspects of the Investigation to be interviewed by the ~~Ad Hoc~~Investigation Committee;
 - to be accompanied by counsel for advisory purposes only when appearing before the ~~Ad Hoc~~Investigation Committee; and
 - to obtain a copy of a transcript of his/her own testimony, if any, and to correct such transcript, if necessary.
 - to obtain a copy of the transcript of each Complainant and Witness interview (but must not be present during such interviews).
- During an ~~appeal~~Appeal, the Respondent shall have the right to review the final Investigation Report.
- The University shall take all reasonable and practical efforts, if requested and as appropriate, to protect or restore the reputation of any Respondent against whom no finding of Research Misconduct is made.

5. Safeguards for Witnesses-

: In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to a Witness:

- During an Investigation, a Witness shall have the right:
 - to obtain a copy of a transcript of his/her own testimony, if any, and to correct such transcript, if necessary.
- If a Witness has cooperated with a Research Misconduct proceeding in ~~good-faith~~Good Faith, the University shall ensure that:
 - all reasonable and practical efforts are made to protect such Witness from potential or actual ~~retaliation~~Retaliation; and
 - diligent efforts are made to protect or restore the position and reputation of such Witness.

~~6. Safeguards for Preliminary Reviewers and Committee Members.~~

6. Safeguards for Committee Members: In addition to any other safeguards provided for in this Policy, the following safeguards shall be provided to members of the Standing Committee and any Inquiry or Investigation Committee:

- The University shall ensure that:
 - all reasonable and practical efforts are made to protect a ~~Preliminary Reviewer or a~~ member of the Standing Committee ~~or and~~ any ~~Ad Hoc~~Inquiry or Investigation Committee from potential or actual ~~retaliation~~Retaliation; and

- diligent efforts are made to protect or restore the position and reputation of ~~such Preliminary Reviewer or~~ Committee member.

~~7.~~ **Guarantees.**

7. ~~7.~~ If, as a result of a finding of Research Misconduct, a Respondent with whom a Complainant or Witness works loses funding for his/her research, the University will guarantee the salary, stipend or tuition of the Complainant or Witness, as follows:
 - Officers of Instruction: salary in accordance with University statutory provisions;
 - Officers of Research: salary or stipend until the later of (x) the last day of the Complainant's or Witness' then current appointment period and (y) the date that is six months after the last day on which the Complainant or Witness was paid from the terminated funding (the "Six-Month Date");
 - Other Officers and members of the support staff: salary until the Six-Month Date; and
 - Students enrolled in pursuit of a degree: stipend and tuition in accordance with the commitment made to the student by his/her School, subject to the student remaining in good academic standing; provided that any such guarantee will terminate when the Complainant or Witness receives funding from an alternate source or accepts an offer of other employment
8. **Corrective Actions and Penalties.**
 - The purpose of the procedures described in this Policy is remedial. The corrective actions with respect to any finding of Research Misconduct shall be commensurate with the seriousness of the Research Misconduct, including, without limitation, the degree to which the Research Misconduct was knowing, intentional or reckless; was an isolated event or part of a pattern; or had significant impact on the Research Record, Research subjects, other researchers, the University, other institutions or the public.
 - No penalty involving dismissal from the University or other serious sanction may become effective except in accordance with the provisions of the University's Code of Academic Freedom and Tenure.

Section N. Notification to Funding Agency and Others

1. In addition to the notices to any Funding Agency provided for in Sections ~~H, I, J, K,~~ and ~~JL~~ above, the EVPR shall, during the course of any phase of the administrative procedures provided for in this Policy with respect to an Allegation, notify the Funding Agency if any of the following events shall occur with respect to Research funded by such Funding Agency:
 - if public health or safety is at risk;
 - if the resources or interests of such Funding Agency are threatened;
 - if research activities should be suspended;

- if there is reasonable indication of possible violations of civil or criminal law;
 - if federal action is requested to protect the interests of those involved in the investigation;
 - if the EVPR believes that the administrative processes may be made public prematurely, so that appropriate steps may be taken to safeguard evidence and protect the rights of those involved; or
 - if the research community or the public should be informed.
2. Upon the completion of the administrative procedures provided for in this Policy, if there has been a finding of Research Misconduct, notification of such will be given to journals and societies to which erroneous, inaccurate or fraudulent papers or abstracts have been submitted, and to past and present collaborating investigators and other institutions and research agencies with which the Respondent is or was previously affiliated to the extent deemed appropriate by the Standing Committee.

Annex A

Terms Applicable to Research Funded by the Public Health Service of the U.S. Department of Health and Human Services.

This Annex sets forth additional provisions from the ~~Public Health Service (“PHS”) Policies on Research Misconduct (the “PHS Policies”) of the Department of Health and Human Services applicable to Allegations of Research Misconduct involving PHS Research~~ PHS Final Rule.

Section A. Definitions

For purposes of this Annex, the following terms have the meanings set forth below:

“Accepted practices of the relevant research community”: those practices established by 42 CFR part 93 and by PHS funding components, as well as commonly accepted professional codes or norms within the overarching community of researchers and institutions that apply for and receive PHS awards.

“PHS Research”: (i) Applications or proposals for PHS support for biomedical or behavioral extramural or intramural research, ~~biomedical or behavioral~~ research training, or activities related to that research or research training, ~~such as the operation of tissue and data banks and the dissemination of research information~~; (ii) PHS-supported biomedical or behavioral extramural or intramural research; (iii) PHS-supported biomedical or behavioral extramural or intramural research training programs; (iv) PHS-supported extramural or intramural activities that are related to biomedical or behavioral research or research training, such as, ~~but not limited to~~, the operation of tissue and data banks or the dissemination of research information; ~~and~~ (v) ~~Plagiarism of research~~ Research records produced ~~in the course of~~ during PHS-supported research, research training or activities related to that research or research training; ~~and~~ Research proposed, performed, reviewed, or reported, as well as any research record generated from that research, regardless of whether an application or proposal for PHS funds

resulted in an awarded grant, contract, cooperative agreement, subaward, or other form of PHS support.

Section B. The Inquiry Phase

1. The Inquiry Report must include the following information:

- ~~the name~~The names, professional aliases, and position~~positions~~ of the Respondent; and Complainant(s).
- ~~a~~A description of the ~~Allegation;~~allegation(s) of research misconduct.
- Details about the PHS ~~support~~funding, including any grant numbers, grant applications, contracts, and publications listing PHS support~~;~~.
- ~~the~~The composition of the Inquiry Committee, if used, including name(s), position(s), and subject matter expertise.
- An inventory of sequestered research records and other evidence and description of how sequestration was conducted.
- Transcripts of interviews, if transcribed.
- Inquiry timeline and procedural history.
- Any scientific or forensic analyses conducted.
- The basis for recommending that the ~~alleged actions~~allegation(s) warrant an ~~Investigation;~~ and investigation.
- ~~any~~The basis on which any allegation(s) do not merit further investigation.
- Any comments on the Inquiry Report by the Respondent or the Complainant~~-(s).~~
- Any institutional actions implemented, including internal communications or external communications with journals or funding agencies.
- Documentation of potential evidence of honest error or difference of opinion.

Section C. The Investigation Phase

1. An Investigation must be initiated within 30 days after the Standing Committee's determination that an Investigation is warranted.
2. Interviews: The Investigation Committee must interview each Respondent, Complainant, and any other available person who has been reasonably identified as having information regarding any relevant aspects of the Investigation, including witnesses identified by the Respondent, and record or transcribe each interview, provide the recording or transcript to the interviewee for correction, and include the recording or transcript in the record of the investigation.

- Interviews during the investigation must be recorded and transcribed.
- Any exhibits shown to the interviewee during the interview must be numbered and referred to by that number in the interview.
- The transcript of the interview must be made available to the relevant interviewee for correction.
- The transcript(s) with any corrections and numbered exhibits must be included in the institutional record of the Investigation.
- The respondent must not be present during the witnesses' interviews but must be provided a transcript of the interview.

2.3. The final Investigation Report must include the following information:

- a description of the nature of the Allegations; allegation(s) of Research Misconduct; including any additional allegation(s) addressed during the research misconduct proceeding.
- a description and documentation of the PHS support, including, for example, any grant numbers, grant application, contracts and publications listing PHS support;
- a description of the specific Allegations of Research Misconduct for consideration in the Investigation;
- composition of the Investigation Committee, including name(s), position(s), and subject matter expertise.
- inventory of sequestered research records and other evidence, except records the institution did not consider or rely on; and a description of how any sequestration was conducted during the investigation. This inventory must include manuscripts and funding proposals that were considered or relied on during the Investigation.
- transcripts of all interviews conducted.
- identification of the specific published papers, manuscripts submitted but not accepted for publication (including online publication), PHS funding applications, progress reports, presentations, posters, or other research records that allegedly contained the falsified, fabricated, or plagiarized material.
- any scientific or forensic analyses conducted. if not already provided with the Inquiry Report, copies to ORI, a copy of this Policy;
- ~~a summary of the Research Record and evidence reviewed, and any evidence taken into custody but not reviewed; and~~
- any comments made by the Respondent and Complainant on the draft Investigation Report and the Investigation Committee's consideration of those comments.

- a statement for each separate Allegation identified during the Investigation, a finding as to allegation of whether the Investigation Committee recommends a finding of research misconduct.
- if the Investigation Committee recommends a finding of Research Misconduct did or did not occur and if so for an allegation, the Investigation Report must, for that allegation:
 - a statement identify the individual(s) who committed the research misconduct.
 - Indicate whether the Research Misconduct was Falsification, Fabrication and/or Plagiarism, and if it was intentional, knowing, or in reckless disregard;
 - a summary of indicate whether the research misconduct was committed intentionally, knowingly, or recklessly.
 - state whether there was a significant departure from accepted practices of the relevant research community and whether the allegation was proven by a preponderance of the evidence.
 - summarize the facts and the analysis which support the conclusion and consider the merits of any reasonable explanation by the Respondent;
 - a description of identify the specific PHS support;
 - an indication of identify whether any publications need correction or retraction;
 - if the Investigation Committee does not recommend a description finding of the person(s) responsible for the Research Misconduct;
- for an allegation, the Investigation Report must provide a description detailed rationale.
- a list of any current support or known applications or proposals for support that the Respondent has pending with PHS and non-PHS federal Federal agencies; and
 - any comments made by the Respondent or the Complainant on the draft Investigation Report

Section D. Record Retention and Submission

1. The University shall must maintain records the institutional record and all sequestered evidence including physical objects (regardless of research misconduct proceedings whether the evidence is part of the institutional record) in a secure manner for 7seven years after completion of a research misconduct the proceeding or the completion of any PHS HHS proceeding involving the research misconduct allegation under 42 C.F.R. Part 93, Subpart subparts D and E of this part, whichever is later, unless custody has been transferred to HHS under 42 C.F.R. Sec. 93.317(c) paragraph (b) of this section or ORI has advised the institution advises otherwise in writing that it no longer needs to retain.
2. On request, the records) in compliance with § 93.317(b). The records to be maintained include University must transfer custody, or provide copies, to HHS of the inquiry report and

final documents produced institutional record or any component of the institutional record and any sequestered evidence (regardless of whether the evidence is included in the institutional record) for ORI to conduct its oversight review, develop the administrative record, or present the administrative record in the course of preparing inquiry report any proceeding under 42 C.F.R. Sec. 93, Subparts D and E.

University Senate

Proposed: December 12, 2025

Adopted: December 12, 2025

66-0-1: In favor-opposed-abstained

**RESOLUTION TO APPROVE AN ACADEMIC PROGRAM LEADING TO THE
Ph.D. IN TECHNOLOGY, MEDIA, AND LEARNING
(Teachers College)**

WHEREAS the rapid pace of technological innovation continues to transform the way technology mediates information, communication, and learning, and

WHEREAS the relationship between human cognition and technological information systems is evolving in unprecedented ways, requiring new theories and methodologies of study; and

WHEREAS Teachers College has proposed this program to provide a research-focused counterpart to the existing Ed.D. program, allowing students to conduct cutting-edge research into the relationship between learning and technology; and

WHEREAS the program would require 150 weeks of full-time study and the completion of 75 credits, with up to 30 transfer credits accepted from previous graduate work; and

WHEREAS the program would expect to enroll two to three students per year and to reach a steady state of ten to fifteen students by year five, and expects no new hiring of full-time faculty or staff; and

WHEREAS talented researchers in master's programs often leave Columbia University for peer institutions throughout the Northeast who offer similar Ph.D. programs; and

WHEREAS the University Senate Education Committee has favorably reviewed the program;

THEREFORE BE IT RESOLVED that the University Senate approve the establishment of the Ph.D. in Technology, Media, and Learning, and

BE IT FURTHER RESOLVED that the University Senate Education Committee will review the program in 2031, five years after its expected launch.

Proponent: Education Committee



PROPOSAL FOR A NEW DEGREE, NEW DEGREE FROM AN EXISTING TRACK, NEW CERTIFICATE, OR NEW CERTIFICATION OF PROFESSIONAL ACHIEVEMENT (CPA) PROGRAM

Please insert the requested information in the table below:

Degree:	Ph.D.
Program Name:	Technology, Media, and Learning
If this program is currently a track in an existing program but has evolved as a stand-alone program, please indicate the program it's based on:	N/A
Sponsoring School(s):	Teachers College
Proposed Start Date:	AY 2027-28
Name and Email Address of the Primary Contact Person for this Proposal:	Ioana Literat, il2311@tc.columbia.edu Nathan Holbert, nh2118@tc.columbia.edu
Date of Proposal Submission:	April 15, 2025 (Revised: December 5, 2025)

DESCRIPTION OF THE PROGRAM

Please complete the questions below and submit this document and the external reviewer list (if applicable) through the APAS system (<https://apas.provost.columbia.edu/>) to begin the review process. *Please note: Firefox is the recommended browser for APAS; functionality may be less optimal when using Internet Explorer or Chrome.*

1) Purpose

- A) Describe in 1-2 paragraphs the purpose of the proposed program, its target audience, its content, and its format/pedagogical approaches.

The Ph.D. in Technology, Media, and Learning (TML) is concerned with the nature of information and knowledge, and the technological systems in which it is embedded, transmitted, and transformed. The program prepares students to understand the materiality and structure of techno-social systems, gather empirical data on how technological design influences knowledge construction and refinement, and develop theories about the cognitive, social, and cultural dimensions of information communication and transformation.

This new Ph.D. program builds on our faculty's recognized contributions to research on learning theory, the design of learning technologies and environments, multimodal literacies, and technology-mediated social interaction. Students in the program will engage with the ideas, practices, and methods of the field through face-to-face instruction, affiliation with faculty research labs, research apprenticeships on externally funded research projects, and independent research. They will also present their work at academic conferences and contribute and first author a range of scholarly publications. The curriculum emphasizes theoretical frameworks for the study of technology and learning, while developing students' methodological expertise through advanced training in both established and emerging methodologies (including quantitative, qualitative, computational, experimental, multimodal and digital research methods). Furthermore, as the technological landscape of the field is constantly changing, student research will often involve developing new methodological approaches for studying emerging technologies in learning contexts.

- B) How does the new program relate to ongoing programs? Will it replace any existing program(s)? Does the proposed program completely or partially duplicate (an) existing program(s) in any other unit of the University?

This Ph.D. program represents a distinct research-focused degree separate from our existing Ed.D. program. While the Ed.D. emphasizes applied research and practice, the Ph.D. will focus on theory-building, contributing foundational knowledge about cognitive, social, and cultural dimensions of learning with technology.

The program has no direct overlap with other Columbia University programs, though we have established collaborative relationships with several departments, programs, and centers at the University. Our faculty hold formal appointments, lead initiatives, and sustain long-term research partnerships across multiple CU schools and centers, including Computer Science, Law, Journalism, Public Health, Engineering, Barnard, Global Centers, and the Center for Teaching and Learning. Faculty regularly contribute through joint grants, guest lectures, workshops, advisory boards, and shared research infrastructure. Columbia and Barnard students participate in our courses and labs, while TC students have taken coursework at CU. The Ph.D. in Technology, Media, and Learning will formalize and strengthen these existing ties.

Examples of existing collaborations include:

- Prof. Paulo Blikstein serves as Affiliate Associate Professor of Computer Science and Director of the Lemann Center for Brazilian Studies at ILAS, collaborating across Computer Science, Political Science, Sociology, History, and Public Health, and co-leading federal grant work with CU faculty.
- Prof. Lalitha Vasudevan collaborates with the Law School on multimodal legal resources for incarcerated learners, serves with the Journalism School through the Spencer Education Journalism Fellowship, and is a member of the Mailman-based SURGE collective.
- Prof. Nathan Holbert collaborates with Barnard Computer Science, supporting shared lab meetings and cross-institutional student research.
- Prof. Ellen Meier serves on the Center for Teaching and Learning Advisory Board and participates in Provost-level teaching and learning initiatives.
- Our faculty maintain active partnerships with Columbia Global Centers on international research and public scholarship projects.

2) Need

A) Why is the proposed program needed locally, statewide or nationally?

The rapid evolution of technology -- such as artificial intelligence, virtual and augmented reality, social media, digital games, and more -- has transformed how humans encounter, engage with, and modify information systems. While humans have always acted in the world with and through technology, the fully networked nature of computational systems that have been bent towards machine learning and self-growing algorithms has resulted in a society where the boundary between humans and technology are invisible and, in many cases, inseparable. This has created an urgent need for reflection and revision of our understanding of human cognition, and the development of an advanced understanding of the construction and inner-workings of techno-social systems of knowledge and communication. Put simply, the world needs people that have a deep understanding of cognition, the design of technology, and the relationship between the two. Our program addresses three critical needs:

- **Theory Building:** The field requires researchers who can develop and test theories about how thinking and learning intersect with and are changed by emerging technologies. This need is all the more pressing with the continued evolution of internet and networking technologies and the introduction of entirely new classes of technologies such as AI that promise/threaten to fundamentally transform educational practices and spaces.
- **Research Leadership:** Top institutions and research organizations need scholars who can lead cutting-edge development and empirically grounded investigations into fundamental questions about technology and learning while critically considering the ethical dimensions of emerging technologies.
- **Knowledge Generation:** The expansion and evolution of technology demands scholars who can contribute new knowledge about how technological innovations impact learning processes and outcomes, and can quickly adapt existing knowledge to new socio-technical systems.

B) Have students at the University or elsewhere requested this program? How many?

We receive approximately 60 doctoral applications annually, with many candidates specifically seeking research training. Current graduate students and prospective applicants frequently inquire about Ph.D. opportunities, demonstrating strong demand for this degree. We often work closely with masters students in our labs, instilling research skills and cultivating their passion, yet later lose these outstanding candidates to our competitors (e.g., Stanford, Northwestern, Harvard, Michigan, Berkeley, Vanderbilt, etc.) who do offer PhD degrees in this field.

- C) If the program is career or professionally oriented, have persons in the profession or career requested establishment of the program? Have the employment needs of professionals in the field been taken into account when designing the program?

While we expect a significant number of our graduates to go into academic careers, industry leaders in educational technology increasingly cite the need for researchers with deep theoretical knowledge and advanced methodological training. These organizations -- many of whom we have established partnerships with (e.g. Google, Sesame Workshop) -- seek Ph.D. graduates who can conduct rigorous research on learning with technology.

Indeed, given rapid advances in new media and learning technologies (e.g., artificial intelligence, virtual and augmented reality, participatory online platforms, digital games, etc.) -- as well as a proliferation of educational programs and policies around these technological advances (e.g., STEM education, CSforAll, makerspaces, etc.) -- the employment prospects for researchers with expertise in such areas are extremely promising, both within and outside of academia. We have provided some examples of such positions in Section 6D.

- D) What other institutions in the metropolitan area and in the Northeast offer similar programs?

Within NYC, NYU Steinhardt offers a similar program: Ph.D. in Educational Communication and Technology, which admits 2-4 students annually. Notable competitors in the Northeast include Harvard's PhD in Learning Sciences and Education, MIT's Media Arts and Sciences PhD program, University of Pennsylvania's PhD in Learning Sciences and Technologies, and Rutgers' PhD in Communication, Information, and Media.

3) Curriculum

- A) Provide a brief summary of the program, in the form of a one-paragraph catalogue or website description.

The Ph.D. in Technology, Media, and Learning prepares scholars to conduct research on how technological innovations shape learning environments and processes. Through advanced coursework, research apprenticeships, and independent investigation, students develop theoretical expertise while mastering both quantitative and qualitative research methods. The program emphasizes theoretical development, methodological rigor, and original contributions to knowledge about thinking and learning in complex techno-social systems. Graduates emerge prepared to lead research initiatives in academic, industry, and policy contexts.

- B) Indicate the **minimum total number of credits** (or clock hours, as appropriate) required for completion of the program, as well as any other program requirements (e.g., final paper, field placement, capstone project). For Bachelor's programs, please indicate both the total number of points required for graduation (e.g., 124 or 128), as well as the minimum number of points within the major or concentration. Also note that the minimum number of points is 30 for Master's programs, 20-24 for Certificate programs, and 12 for Certification of Professional Achievement (CPA) programs.

Per Teachers College requirements, a minimum of 75 points, including up to 30 transfer credits accepted from previous graduate work.

Additional Requirements:

- **MSTU 5025: Researching Technology in Educational Environments.** All doctoral students will take this 3-credit foundational methods course, which exposes them to major methodological paradigms in our field and examines how scholars align theories, research questions, methods, and forms of

evidence. Taking this required course ensures that all Ph.D. students begin with a shared methodological foundation before moving into more advanced or specialized methods work.

- **Doctoral Colloquium.** All doctoral students will participate in the Doctoral Colloquium (a yearlong course taken for 3 credits in their first four years of study, for a total of 12 credits). Led by the program director, the Doctoral Colloquium aims to professionalize doctoral students as emerging researchers, while engaging them in discussion of critical issues and key works in the field.
- **Certification requirements.** There are 3 requirements for certification: a) the certification exam, b) the pilot study and c) the literature review.
 - Students take a certification exam at the end of their core coursework (typically in their 2nd year of doctoral studies). This is a take-home exam, written over a three-day period. The first part of the exam consists of a mandatory question that probes students' foundational knowledge of social, cultural and cognitive approaches to the study of technology and education. The second part of the exam allows students to choose one question out of three possible choices, in accordance with their research interests; this question tests students' readiness to engage in advanced research work, by asking them to design research studies according to specific scenarios or to apply a research lens to real-world examples. The questions are developed anew every semester by program faculty, by rotation. After the exams are returned, each exam is read and scored by all tenured/tenure-track faculty, who meet as a group to discuss students' exams. Students' names are removed from their exam and the exams are then circulated during the meeting of the faculty. The exam is read and discussed and a decision is made about its grade. Exams are rated as High Pass, Pass, or Failure. Students who fail the Qualifying Exam are able to take the exam one additional time. If they fail a second time they may not continue in the program.
 - Students design, execute and write up a pilot research study that aims to prepare them for dissertation work. Generally, this is a smaller-scale version of the dissertation project, or a separate project related to the topic. The pilot study is conducted under the close guidance of their faculty advisor / dissertation sponsor, who needs to read and approve it as complete.
 - Finally, students will write a comprehensive literature review related to their dissertation research. This review of literature will demonstrate the capacity to identify, organize, interpret, and critique a range of scholarship, and will build a foundation for the second chapter of the dissertation. The literature review will be read and approved by the dissertation sponsor.
- **Doctoral Dissertation.** The dissertation submitted for the Ph.D. in TML is an extensive written document reporting a disciplined, scholarly investigation of an issue at the intersection of technology and education. The steps to completing a dissertation include:
 - Dissertation prospectus: The student prepares a dissertation prospectus, which is meant to assess the feasibility of their dissertation plans, and which generally includes a statement of the purpose, a review of the literature, theoretical framing or conceptual framework, research question(s), research design (including plans for data collection and data analysis), and timeline. The prospectus defense hearing starts with a brief oral presentation of this content, followed by discussions with the committee, which includes the dissertation sponsor and at least two additional faculty members. Doctoral dissertation proposals must be approved in writing by a committee of at least three faculty: at least two must be department faculty named on the GSAS list of approved dissertation advisors; a third can be from within the department, from another department at Columbia, or from outside the university (with GSAS permission). Students will register for the Dissertation Seminar (MSTU 7501 for 1 point) when presenting the Dissertation Prospectus, and for MSTU 8900 (i.e.,

dissertation advisement) in every semester thereafter, until the final defense of the dissertation when students will register for TI8900, PHD Dissertation Defense. Students must defend the prospectus successfully by May 31 of their fourth year, though most students will defend it in Year 3, following the completion of coursework.

- IRB review: After the successful dissertation proposal hearing, the student applies for Institutional Review Board (IRB) approval. IRB approval is required regardless of whether or not the student intends to use human subjects.
- Oral defense of the dissertation: The purpose of the Dissertation Oral Defense is to determine the acceptability of the dissertation and to assess the need for revisions prior to preparation of the deposit. The Dissertation Oral Defense is held on a set date and a specific time for two hours. The student will be asked to make a presentation (usually 15-20 minutes), giving an overview of their research. The assembled committee will then engage the student in a discussion of the study. Per GSAS guidelines, the doctoral defense will be conducted by a final defense committee that is composed of exactly five members. Three of the members of the final defense committee must be inside examiners (holding a formal appointment or approved as a dissertation sponsor in the doctoral candidate's home department, program, or Teachers College), and at least one (but preferably two) of the five must be an outside examiner, as defined by the GSAS. Following the discussion and private deliberations by the committee, the committee will vote whether the dissertation approved as submitted, approved pending revisions, referred, or failed.

The quality of the dissertation will be determined by the candidate's demonstrated performance in the following areas:

1. Originality and significance: The dissertation addresses a novel research question, contributing new knowledge, insights, or solutions that are of significant importance to the field. It demonstrates a clear understanding of existing research and identifies gaps that need to be filled.
2. Research design: The dissertation employs appropriate research methods that are rigorous, ethically sound, and well aligned with the research objectives. Data collection and analysis processes are systematic, well-documented, and aligned with the research question(s).
3. Critical analysis: The dissertation demonstrates advanced critical thinking and analytical skills. Data is well analyzed and findings are synthesized with the existing body of knowledge to highlight contributions and implications.
4. Theoretical integration: The dissertation is grounded in a solid theoretical framework that demonstrates a deep understanding of relevant concepts.
5. Contribution to the field: The dissertation makes a substantial contribution to the field, with implications for theory, policy, practice, and/or future research. It clearly communicates the significance of the findings and how they can advance knowledge and improve educational outcomes.
6. Clarity and organization: The dissertation is well-written and appropriately structured and formatted.

- **En Route MA and MPhil Requirements:**

- Students who enter the program without a relevant master's degree will complete a Master of Arts (MA) en route to the Ph.D., upon successful completion of two Residence Units and required coursework. Students who already hold a relevant MA may be granted two Residence Units of advanced standing in lieu of the en route MA.

- In either case, students must complete a total of six Residence Units to be eligible for the Master of Philosophy (MPhil) degree, which is required for the Ph.D. In addition to the Residence Unit requirement, students must complete three program certification milestones prior to receiving the MPhil (each described above):

1. Certification Exam;
2. Pilot Study;
3. Comprehensive Literature Review.

Upon completion of these milestones and fulfillment of the RU requirements, the MPhil will be awarded, enabling students to proceed to the dissertation phase of the Ph.D.

- C) Please use the table below to list the required, elective, and selective coursework. “Selective” coursework consists of a list of courses from which a student must select a minimum number of credits (but need not take all courses on the list).

REQUIRED COURSES					
Minimum number of required credits = <u>3</u>	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
	TC	MSTU 5025	Researching Technology in Educational Environments	Not online	3
	TC	MSTU 6600	Doctoral Colloquium	Not online	3
	TC	MSTU 6601	Doctoral Colloquium	Not online	3
	TC	MSTU 6602	Doctoral Colloquium	Not online	3
	TC	MSTU 6603	Doctoral Colloquium	Not online	3
	TC	MSTU 7501	Dissertation Proposal Seminar	Not online	1
	TC	MSTU 8900	Dissertation Advisement	Not online	0
	TC	TI 8900	PhD Dissertation Defense	Not online	0
SELECTIVE COURSES: <u>Foundational Knowledge</u> Students must take one course from each foundational area (at least 3 must be 5000-level and up) = <u>15 credits</u>	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
Cognitive Theory and Technology	TC	MSTU 4088	Introduction to the Learning Sciences and Educational Technology	Not online	3
	TC	MSTU 5035	Technology and Metacognition	Not online	3
Social Theory and Technology	TC	MSTU 4005	Equity, Ethical, and Social Issues in Educational Technology	Not online	3
	TC	MSTU 4016	The History of Communication	Not online	3
	TC	MSTU 5010	Boundaries and Theories of Learning with Technological Artifacts	Not online	3

	TC	MSTU 5020	Computer-Mediated Communication	Not online	3
Cultural Theory and Technology	TC	MSTU 4028	Technology & Culture	Not online	3
	TC	MSTU 5002	Culture, Media, and Education	Not online	3
	TC	MSTU 5004	Digital Geographies and Virtual Spaces	Not online	3
	TC	MSTU 5606	Theoretical Approaches to Communication and Culture	Not online	3
Technology and Educational Change	TC	MSTU 4083	Instructional Design of Educational Technology	Not online	3
	TC	MSTU 5001	Assessing the Impact of Technology in Schools	Not online	3
	TC	MSTU 5515	New Media Teaching and Learning	Not online	3
Design as Inquiry: Theory and Practice	TC	MSTU 5027	Tools and Toys for Knowledge Construction	Not online	3
	TC	MSTU 5180	Beyond Bits and Atoms	Not online	3
	TC	MSTU 5181	Beyond Bits and Atoms Lab	Not online	1-3
	TC	MSTU 5003	Theory and Programming of Interactive Media	Not online	3
SELECTIVE COURSES: Research Methods		Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
Minimum number of credits = __12 credits__					
	TC	MSTU 6100	Digital Research Methods	Not online	3
	TC	MSTU 6532	Seminar in Communication, Media, and Learning Technologies Design	Not online	3
	TC	C&T 5502	Introduction to Qualitative Research in Curriculum and Teaching	Not online	3
	TC	ITSF 5000	Methods of Inquiry: Ethnography and Participant Observation	Not online	3
	TC	ITSF 5009	Social Network Analysis	Not online	3
	TC	HUDK 4050	Core Methods in Educational Data Mining	Not online	3
	TC	HUDM 4122	Probability and statistical inference	Not online	3
	TC	HUDM 5122	Applied Regression Analysis	Not online	3
	TC	HUDM 5123	Linear models and experimental design	Not online	3
	TC or CU	Other courses chosen in consultation with advisor to support research specialization			

ELECTIVE COURSES					
Minimum number of credits = <u>15 credits</u>	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
	TC	MSTU 5000	Virtual Reality, Augmented Reality, Mixed Reality, and Games as Learning Tools	Not online	3
	TC	MSTU 5013	Theory and Programming of Interactive Media: Part II	Not online	3
	TC	MSTU 5015	Research in Serious Games	Not online	3
	TC	MSTU 5029	Technology Leadership and Schools	Not online	3
	TC	MSTU 6000	Advanced Design of Educational Games	Not online	3
	TC	MSTU 6901	Research and Independent Study in Communication, Computing, and Technology in Education	Not online	3
	TC or CU	Other courses chosen in consultation with advisor to support research specialization			

D) Provide a sample schedule showing the courses the students will take during each term of the program. For elective or selective courses, simply enter “elective” or “selective.”

NOTE: This sample schedule also accounts for transfer credits. Per Teachers College stipulations, students can transfer up to 30 credits.

Semester 0: TRANSFER COURSES			
Course Number & Title	Credits	New?	Prerequisites
Transfer courses	16		
TOTAL CREDITS FOR SEMESTER:	16		
Semester 1 (Fall)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 5025 Researching Technology in Educational Environments	3		
MSTU 5035 Technology and Metacognition	3		
MSTU 5027 Tools and Toys for Knowledge Construction	3		
MSTU 6600 Doctoral Colloquium	3		
TOTAL CREDITS FOR SEMESTER:	12		
Semester 2 (Spring)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 5010 Boundaries and Theories of Learning with Technological Artifacts	3		
Methods Selective	3		
Elective	3		
MSTU 6600 Doctoral Colloquium (<i>yearlong course with continuous registration; credits applied in fall</i>)	0		
TOTAL CREDITS FOR SEMESTER:	9		
Semester 3 (Fall)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 5002 Culture, Media, and Education	3		
MSTU 6100 Digital Research Methods	3		

Elective	3		
MSTU 6601 Doctoral Colloquium	3		
TOTAL CREDITS FOR SEMESTER:	12		
Semester 4 (Spring)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 5515 New Media Teaching and Learning	3		
MSTU 6901 Research and Independent Study	1		
Methods Selective	3		
Elective	3		
MSTU 6601 Doctoral Colloquium (<i>yearlong course with continuous registration; credits applied in fall</i>)	0		
TOTAL CREDITS FOR SEMESTER:	10		
Semester 5 (Fall)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 6532 Seminar in Communication, Media, and Learning Technologies Design	3		
Methods Selective	3		
Elective	3		
MSTU 6602 Doctoral Colloquium	3		
TOTAL CREDITS FOR SEMESTER:	12		
Semester 6 (Spring)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 7501 Dissertation Proposal Seminar	1		
MSTU 6602 Doctoral Colloquium (<i>yearlong course with continuous registration; credits applied in fall</i>)	0		
TOTAL CREDITS FOR SEMESTER:	1		
Semester 7 (Fall)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 8900 Dissertation Advisement	0		
MSTU 6603 Doctoral Colloquium	3		
TOTAL CREDITS FOR SEMESTER:	3		
Semester 8 (Spring)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 8900 Dissertation Advisement	0		
MSTU 6603 Doctoral Colloquium (<i>yearlong course with continuous registration; credits applied in fall</i>)	0		
TOTAL CREDITS FOR SEMESTER:	0		
Semester 9 (Fall)			
Course Number & Title	Credits	New?	Prerequisites
MSTU 8900 Dissertation Advisement	0		
TOTAL CREDITS FOR SEMESTER:	0		
Semester 10 (Spring)			
Course Number & Title	Credits	New?	Prerequisites
TI 8900 PhD Dissertation Defense	0		
TOTAL CREDITS FOR SEMESTER:	0		

- E) Please provide the typical number of weeks in the Academic Year for this program, counting Fall and Spring semesters. Note that regulations define a “week” as any 7-day period in which ANY instructional activity occurs; this includes classes, discussion sections, labs, exam periods, and study periods. A single activity in a given week counts as a week of school. Virtually the only weeks not to be counted are orientation week and vacation weeks.

30 weeks (15 weeks each fall and spring semester)

- F) Please also indicate the number of weeks IN TOTAL that it would take a typical full-time student to complete the program. For example, for a one-year MS program, which can typically be completed in Fall and Spring terms, you would likely provide the same answer you gave immediately above (for weeks in the academic year). If a program requires 2 years of study, then you would multiply the number of weeks in the academic year by 2. If summer terms are included, please include 6-10 weeks, as appropriate, for each summer term

150 weeks (generally, this amounts to 5 academic years if the students do not take summer courses, or 4 years if they do).

- G) Does the proposed program rely to a significant extent on courses that are offered by other parts of the University? If so, identify those courses and confirm that you have discussed course availability and capacity with the unit in which those courses are housed.

No

- H) For any new courses to be developed for this program, provide a draft syllabus and include information on when the courses have been or will be approved by the appropriate Committee(s) on Instruction.

N/A

- I) Indicate whether course credits earned in the proposed program can also be counted toward another degree or certificate.

N/A

4) Library Resources

- A) Have you consulted with a library subject specialist about what library resources (e.g., books, databases, journals, streaming video or audio, data sets, etc.) or other support (research consultations, library instruction, etc.) you anticipate needing for this program? If yes, please list those resources expected below.

N/A. All necessary resources are already available through the Gottesman Libraries and the Digital Futures Institute at Teachers College.

5) Faculty

- A) Provide the name of the program director and the percent of time this individual will dedicate to leadership of the program.

Dr. Ioana Literat would direct the Ph.D. program in AY 25-26, devoting 25% of her time.

- B) Indicate if the program will require the hiring of new faculty either at its inception or by the time it reaches steady state. If so, indicate the number of new faculty it will require, divided between full- and part-time, the subjects they will teach and the year(s) of their initial appointment.

Since we plan to admit a limited number of students, we do not anticipate needing to hire new faculty. A newly hired tenure-track Assistant Professor joined us in Fall 2025. We expect this newly hired faculty to work closely with doctoral students, and to teach both required courses and new research courses in their area of expertise.

6) Students

- A) Describe the requirements for admission to the program.

The application process requires submission of several key documents. Applicants must provide a personal statement articulating their research interests and goals, along with a scholarly writing sample that demonstrates their academic capabilities. Three letters of recommendation from research supervisors or scholars familiar with the applicant's work will be required, as well as complete academic transcripts from all previous institutions. A comprehensive curriculum vitae or resume should detail the applicant's academic and professional experience. International applicants must also submit TOEFL or IELTS scores demonstrating English language proficiency.

The faculty evaluates applications based on several essential criteria. While a master's degree in education, communication, media studies, information technology, computer science, or a related field is preferred, we will consider candidates' overall academic preparation and performance. The admissions committee looks for evidence of research experience or clear potential for doctoral-level research, as demonstrated through past projects, publications, or professional work. Candidates should present a well-developed research agenda that aligns with our program's strengths and faculty expertise.

Following initial application review, the program invites promising candidates for interviews with the faculty committee. These interviews allow for in-depth discussion of research interests and fit, while providing candidates an opportunity to learn more about our program's resources and opportunities.

- B) Provide the anticipated enrollments of students in the program's first five years, and ultimate enrollment once it reaches steady state. Indicate the number of years it will take to grow the program to its full size.
- Year 1: 2-3 students
 - Year 2: 2-3 new students; 4-6 total
 - Year 3: 2-3 new students; 6-9 total
 - Year 4: 2-3 new students; 8-12 total
 - Year 5: 2-3 new students; 10-15 total (steady state)
- C) If this is a dual-degree program, either between schools of the University or a joint program in collaboration with another institution, describe the support the students will receive from the participating schools or institutions and how the program will ensure that they have access to the courses and resources they will need to complete its requirements.

N/A

- D) Describe the types of positions for which the program will qualify its students.
- Within academia, we expect that graduates from our PhD program will be in high demand not only for faculty jobs in graduate programs in education and learning sciences, but also in other adjacent disciplines with an interest in technology and learning, such as communication, media studies, or computer science.
 - Outside of academia, graduates of this program would be well-positioned for research leadership roles across multiple sectors. In technology companies, they can serve as Learning Sciences Researchers, Educational Technology Research Directors, or Learning Experience Research Leads, shaping how emerging technologies support learning and development. With emerging technologies such as AI expanding quickly in the tech sectors, Ph.D. graduates that can fill these positions are in high demand. Within educational technology companies, they can take on positions as Chief Learning Officers, Directors of Learning Innovation, or Research Directors, where they guide product development and evaluation using their methodological expertise. Policy organizations and

nonprofits will seek these graduates as Research Directors or Senior Scientists to inform educational technology policy and implementation.

7) Online Delivery. If the proposed program will have an on-line component, answer the following questions.

N/A. This will be a face-to-face program.

8) Finances

No new expenses are anticipated. Due to the small size of the PhD program (2-3 admitted students annually) and the size of our faculty (10 full-time faculty) and staff (2 staff members), the program will operate within existing resources, and no new faculty hires, administrative staff, or technical infrastructure are required at this time.

- C) Show the net surplus or deficit produced by the program in each of its first three years, and when it will reach steady state if that will occur in a later year.

Not applicable. Since the program does not generate new revenue or incur new expenses, no surplus or deficit is expected.

9) Evaluation

- A) Describe how the quality of the program will be evaluated, including the frequency of the reviews and who will conduct them. Describe how student input will be obtained as part of the evaluation of the program.

Student progress will be evaluated annually through a systematic review process that includes faculty assessment of academic performance, research progression, and professional development milestones (see also section B below). This review process will incorporate student self-evaluations and individual meetings with advisors to ensure students have voice in their development plans. Additionally, program faculty will conduct annual program-wide reviews at our annual spring retreat, examining student achievement data, curriculum effectiveness, and progress toward program goals. These reviews will incorporate feedback gathered from students in doctoral colloquium (our required doctoral student professionalization course). Finally, building on current efforts for our other programs, we will implement systematic tracking of alumni

career trajectories and maintain regular communication with graduates through alumni engagement events.

- B) Include a learning outcomes and assessment plan for the proposed program, using the below template. Examples can be found here:

<http://academicprograms.columbia.edu/assessment-student-learning>)

Program Goals for Student Learning	Assessment of Learning Outcomes
<i>Please list overall programmatic goals below.</i>	<i>Please indicate primary measures of student learning, which may include direct measures (e.g., coursework) and indirect measures (e.g., alumni outcomes).</i>
Students will demonstrate advanced theoretical understanding of the interplay between technology and learning in their respective areas of interest	Performance in relevant coursework; quality of theoretical engagement in dissertation proposals and final dissertations; performance on theory section of certification exam; original theoretical contributions in published work
Students will master and apply appropriate research methodologies to investigate questions about technology and learning	Performance in relevant coursework; quality of pilot study design and execution; quality of dissertation design and execution
Students will actively participate in scholarly discourse through research dissemination and academic engagement	Quality and quantity of conference presentations and peer-reviewed publications; participation in peer review of manuscripts or conference proposals; engagement in academic professional associations; impact of academic work via citations, press, public visibility
Students will develop professional competencies in teaching, mentoring, and research leadership	Teaching observations; student course evaluations; quality of research mentorship with master's students

10) External Review for NEW Master's and Doctoral Programs.

Please provide the names of experts in the field of the program at institutions outside of New York State. Proposed reviewers should be specialists in the area of the program but should not have had an association with Columbia that would compromise the independence of their evaluations. NYSED considers that a conflict of interest exists if a proposed reviewer:

- has had an appointment at the University or is related to someone who has;
- was previously consulted about the development of the proposed program; or
- has a professional relationship with someone at the University such as collaborating on externally funded research and publications.

For new master's programs, the University must supply one external review; for doctoral programs, two external reviews are required. For this reason, please identify 3 potential reviewers for master's proposals, and 5 potential reviewers for doctoral proposals.

For each potential reviewer, include institutional affiliation, contact information and a link to the individual's website which lists his/her educational credential (including where his/her degrees were received) and employment history. If full information on degrees and employment cannot be viewed from the website, NYSED may require that we supply them with the individual's CV.

Please note that this requirement does not apply to new DUAL or JOINT degree programs, or to new BACHELOR's programs; we do not need to submit external reviews for these programs.

- [Yasmin Kafai](#), Professor, University of Pennsylvania, kafai@upenn.edu
- [Joshua Danish](#), Professor, Indiana University, jdaniel@iu.edu
- [Joseph Poleman](#), Professor, University of Colorado Boulder, Joseph.Polman@Colorado.edu
- [Dor Abramson](#), Professor, University of California Berkeley, dor@berkeley.edu
- [Carol Lee](#), Professor, Northwestern University, cdlee@northwestern.edu

University Senate

**RESOLUTION TO APPROVE AN ACADEMIC PROGRAM LEADING TO THE
Ph.D. IN EDUCATIONAL NEUROSCIENCE
(Teachers College)**

WHEREAS there is an emerging interest in understanding the neurobiological processes underpinning cognition and behavior; and

WHEREAS there is increasing demand from students to engage in scientific inquiry into the areas of learning across the lifespan; and

WHEREAS recent and continuing technological advances in brain imaging and research methods for neurosciences allow investigators to look in greater details than ever before at the neurobiological processes of development, learning, memory as well as other cognitive processes and behavior; and

WHEREAS the proposed program will require 150 weeks of full-time study and the completion of 75 credits, with up to 30 transfer credits accepted from previous graduate work (e.g. graduates of the extant Master of Science program in Neuroscience and Education (Teachers College)); and

WHEREAS the program expects to admit one to two students per year and to reach a steady state of five to ten students by year five; and

WHEREAS collaborative interactions with the world-renowned PhD program in Neurobiology and Behavior (Vagelos College of Physicians and Surgeons) that currently includes more than 150 mentors, may provide additional cross-campus cooperation; and

WHEREAS the University Senate Education Committee has favorably the proposed program;

THEREFORE, BE IT RESOLVED that the University Senate approve the establishment of the Ph.D. in Educational Neuroscience; and

BE IT FURTHER RESOLVED that the University Senate Education Committee will review the program five years after its launch.

Proponent: Education Committee



PROPOSAL FOR A NEW DEGREE, NEW DEGREE FROM AN EXISTING TRACK, NEW CERTIFICATE, OR NEW CERTIFICATION OF PROFESSIONAL ACHIEVEMENT (CPA) PROGRAM

Please insert the requested information in the table below:

Degree:	Doctor of Philosophy
Program Name:	Educational Neuroscience
If this program is currently a track in an existing program but has evolved as a stand-alone program, please indicate the program it's based on:	
Sponsoring School(s):	Teachers College
Proposed Start Date:	Fall 2025
Name and Email Address of the Primary Contact Person for this Proposal:	Karen Froud kf2119@tc.columbia.edu
Date of Proposal Submission:	January 16, 2024

DESCRIPTION OF THE PROGRAM

Please complete the questions below and submit this document and the external reviewer list (if applicable) through the APAS system (<https://apas.provost.columbia.edu/>) to begin the review process. *Please note: Firefox is the recommended browser for APAS; functionality may be less optimal when using Internet Explorer or Chrome.*

1) Purpose

A) Describe in 1-2 paragraphs the purpose of the proposed program, its target audience, its content, and its format/pedagogical approaches.

The proposed Ph.D. program in Educational Neuroscience is designed to forge deep and innovative connections between theoretical frameworks derived from educational and pedagogical practice, and neuroscientific experimentation and evidence. Its primary purpose is to explore and understand the neurobiological underpinnings of learning and cognition and how these insights can be applied to learning and educational contexts. The target audience includes individuals interested in the intersection of neuroscience and education, particularly those aspiring to pursue careers in academia, research, or specialized educational settings. We anticipate that the proposed program will serve students with the following kinds of backgrounds:

- Students with prior background and/or experience in the neurosciences, who wish to obtain expertise and experience in the real-world application and translation of scientific research
- Teachers and educators working with people across the lifespan, from early childhood through adult
- Special needs educators and clinicians, for example who have an interest in developmental disorders like ADHD, dyslexia, autism
- Professionals working with those who have brain injuries, neuromuscular diseases, or stroke sequelae, such as speech-language pathologists, physiotherapists, occupational therapists, neuropsychologists
- Educational policy-makers including school principals, school board officials, and lobbyists who understand the role of neuroscience for informing pedagogical methods and outcomes
- Parents, caregivers, and paraprofessionals for those with developmental or acquired disorders

The proposed Ph.D. program in Educational Neuroscience will be offered through the Department of Biobehavioral Sciences at Teachers College, where the field of educational neuroscience actually originated in the 1970s. The proposed program is research-intensive, requiring in-person attendance with full-time engagement required. A hands-on, experiential learning approach is emphasized through a combination of lectures, seminars, laboratory work, and supervised research. By fostering an environment where students can engage deeply with theoretical and practical aspects of educational neuroscience, we aim to prepare researchers who can address fundamental questions about how the brain learns and how educational practices can be optimized to promote learning.

B) How does the new program relate to ongoing programs? Will it replace any existing program(s)? Does the proposed program completely or partially duplicate (an) existing program(s) in any other unit of the University?

Our proposed PhD program aims to clarify and streamline existing processes. At present, students wishing to pursue avenues for doctoral research in educational neuroscience must follow a complex and hybrid pathway, representing a series of collaborations across departments and programs. For example, doctoral students in this field have graduated by undertaking research training in

laboratories in the Biobehavioral Sciences Department while being registered for doctoral studies in other programs, such as Cognitive Studies & Education, Developmental Psychology, Curriculum and Teaching, or Communication Sciences & Disorders. Hence, the proposed doctoral program does not duplicate or replace any existing program, but will serve the purpose of consolidating and formalizing the current process and will efficiently integrate existing faculty engagement and research training.

2) Need

A) Why is the proposed program needed locally, statewide or nationally?

The introduction of the doctoral program in Educational Neuroscience at Teachers College responds to an emerging national interest in understanding the neurobiological processes underpinning cognition and behavior, as well as educational policy and practice. Correspondingly, there is an increased demand by students to engage in scientific inquiry into the areas of learning across the lifespan, processes of development and skill acquisition in children and adults, and protocols for educational assessment and intervention in multiple cognitive domains. Recent and continuing technological advances in brain imaging and research methods for the neurosciences allow us to look in greater detail than ever before at the neurobiological processes that underpin development, learning, memory, as well as other cognitive processes and behaviors.

B) Have students at the University or elsewhere requested this program? How many?

Anecdotally, every year multiple students request access to doctoral training in educational neurosciences. Many of these are graduates of the extant Master's program in Neuroscience & Education at TC. The current director of this program, Prof. Karen Froud, reports that 6-10 students in each master's level graduating class submit inquiries about continuing their training to doctoral level each year. Interest has also been indicated from students at CU and Barnard. Each year a handful of requests come from students outside the CU community, approximately 2-3 per year. Some of these requests result in recruitment to doctoral training in other programs of the college, as described above, with students specifically aiming to gain research training in applied educational aspects of neuroscience.

To formalize this anecdotal evidence of demand for the proposed program, a survey was circulated in summer 2022 to 85 current students, of whom 17 responded (20%). Asked if they had interest in a PhD program in Educational Neuroscience at Teachers College, responses from this small sample were *all positive* but interacted strongly with issues of funding. Regardless of funding status, 3 of 17 respondents indicated that they would wish to engage in such a program; 13 indicated that they would or probably would if funding was available, and 1 indicated that they would most likely be interested if fully funded but would still strongly consider if partially funded. The survey was also circulated to 357 graduates of TC's M.S. program in Neuroscience & Education from 2007 to 2021, 50 of whom responded (a 14% response rate). When sampled alumni were asked, "would the PhD program in Educational Neuroscience at Teachers College have been appealing to you on graduation?" 64% (32 respondents) indicated "Yes, definitely if fully funded"; 14% (7 respondents) indicated that they loved the idea of the PhD, but that it was not necessary to their current practice; and 12% (6 respondents) indicated that it might be appealing if fully funded.

C) If the program is career or professionally oriented, have persons in the profession or career requested establishment of the program? Have the employment needs of professionals in the field been taken into account when designing the program?

Not applicable. However, the overall goal of the program is to prepare graduate students to become

future leaders in neuroscience and education research by providing integrated training in neuroscience and the learning sciences. Employment needs of future researchers have informed the structure of the proposed program, for example by incorporating hands-on experiences in laboratories employing different methodologies, training in grant writing, and opportunities to engage in research dissemination in professional contexts.

D) What other institutions in the metropolitan area and in the Northeast offer similar programs?

- **Columbia University** is home to the world-renowned doctoral program in Neurobiology and Behavior, that currently includes more than 150 mentors. In our discussions with the directors of the program, Daphna Shohamy and Carol Ann Mason, we discovered that they would welcome a Ph.D. in Educational Neuroscience at Teachers College as a complementary offering in a highly relevant and in-demand applied domain. The proposed program could directly feed into the Zuckerman Institute's program for Presidential Scholars in Society and Neuroscience, and would provide opportunities to build the kind of trans-campus cooperation that has been a hallmark of neurosciences at Columbia. A strong letter of support for our proposed program from Dr. Shohamy and Dr. Mason is attached at the end of this application.

Only three other programs (Vanderbilt, Harvard, and Gallaudet) around the country offer Ph.D. training in this discipline, but none of these would be considered direct competitors, for various reasons:

- **Vanderbilt University** offers a high-profile Ph.D. in Educational Neuroscience and they are world leaders in the field. Their Ph.D. takes a minimum of 5 years to complete and students are rigorously trained in areas of education (e.g., reading, mathematics, or psychosocial development) and in specific research methodologies (e.g., neuroimaging or genetics). The program is part of the Vanderbilt Neuroscience Graduate Program, and students have access to outstanding resources.
- **Gallaudet University** has offered a Ph.D. Program in Educational Neuroscience since 2013. The program is housed at Gallaudet's National Science Foundation Science of Learning Center, Visual Language and Visual Learning. Students have access to an in-house, research-dedicated neuroimaging facility in the Brain and Language Laboratory for Neuroimaging, and the doctoral training provided is rigorous and highly-structured. Students attending Gallaudet are required to be fluent in American Sign Language.

With respect to both of these programs we note that they have situated education within a neuroscience program, whereas our proposed program situates neuroscience directly within the largest and oldest graduate school of education in the nation, meaning that the applied domains of neuroscientific research are centered in a way that is not possible elsewhere. Studying in a school of education provides collaborative opportunities that permit a more comprehensive understanding of how brain research relates to education, as well as offering opportunities for students to network with educators and researchers in the field of education - invaluable for understanding how educational neuroscience can be applied in real-world situations. There also exist geographical advantages conferred by our location in New York City, allowing for unique educational experiences and a wide range of research training opportunities.

- **Harvard University** offers a concentration in "Mind, Brain, and Education" as one pathway through doctoral-level training at their graduate School of Education. Again, this is a rigorous program offered at a top-tier institution, with outstanding resources. However, we note that the Mind, Brain, Education program at Harvard is an interdisciplinary program that students must carve out for

themselves; lacking a specific structure, students may find it difficult to navigate. Our proposed program takes a different approach.

Aside from Vanderbilt, Gallaudet, and Harvard, *no other institutions* in the United States offer specific doctoral level training in Educational Neuroscience. The University of Alabama, and Sierra University, both offer an Ed.D program in educational psychology that can include some optional neuroscience coursework. Butler University and the University of Nebraska at Lincoln offer certificate programs. A handful of foreign universities offer some educational neuroscience programming, notably University College London, that has a Center for Educational Neuroscience; and Cambridge University, with the Centre for Neuroscience in Education.

Given this paucity of programming, the proposed Ph.D. program offers a unique opportunity to establish TC and Columbia as leaders in this still-nascent field. Additionally, Teachers College has a well-established history of innovation at this intersection exemplified through the success of our Master of Science degree in Neuroscience & Education.

3) Curriculum

A) Provide a brief summary of the program, in the form of a one-paragraph catalogue or website description.

The Ph.D. in Educational Neuroscience at Teachers College underscores our enduring commitment to exploring the connections between neuroscience, cognition, and educational theory. In response to the growing national interest in comprehending the neurobiological foundations of cognition and learning, this distinctive program provides research training with a particular emphasis on the applications of neuroscientific research to educational contexts. Students acquire robust theoretical foundations in neuroscience, while gaining hands-on experience in laboratory research and engagement with diverse educational domains. Graduates of the program are equipped with the theoretical and experimental skills essential for conceptualizing, designing, and executing research programs at the intersections of neuroscience and education, and are well-prepared to assume leadership roles across academic, research, and educational settings.

B) Indicate the minimum total number of credits (or clock hours, as appropriate) required for completion of the program, as well as any other program requirements (e.g., final paper, field placement, capstone project). For Bachelor's programs, please indicate both the total number of points required for graduation (e.g., 124 or 128), as well as the minimum number of points within the major or concentration. Also note that the minimum number of points is 30 for Master's programs, 20-24 for Certificate programs, and 12 for Certification of Professional Achievement (CPA) programs.

75 credits (including up to 30 points transfer credit)

Certification Examination and Qualifying Paper

The Certification Examination occurs at the end term of the Core Sequence (typically after the third or fourth semester of doctoral studies). The exam focuses on salient issues in educational neuroscience, critical reading, academic writing, and argument building. The certification exam is a 3-hour exam, taken in an exam setting provided by the Teachers College Office of Doctoral Studies. Students are presented with multiple questions from three major fields of knowledge within the discipline of Educational Neuroscience: Neuroscience of Language and Literacy; Neuroscience of Cognition and Learning; and Implications of Neuroscience for Educational / Social Policy. They answer a total of two questions of their choice but these must be selected from two of three domains.

After the examinations are returned, each examination is read by at least two members of the program faculty. Exams are rated as Pass, or Failure. Committee members meet to discuss and resolve any disagreements among the raters. Students who fail the Certification Exam are able to take the exam one additional time. If they fail a second time they may not continue in the program.

The second part of the Certification Exam is the Qualifying Paper. This usually takes place in the semester when students have accumulated roughly 60 credits. In consultation with the dissertation sponsor, students will write a literature review. This review of literature will be related to their dissertation research and demonstrate the capacity to identify, organize, interpret, and critique a range of scholarship, often leading to a proposed theoretical framework for the dissertation. The Qualifying Paper is read by two faculty members. Qualifying Papers are graded on a Pass/Fail basis.

Post-Certification Requirements

Ph.D. candidates must take a minimum of 12 additional points after meeting certification requirements, including the points enrolled during the semester in which certification occurs.

Dissertation Proposal

The student prepares a dissertation proposal according to the program requirements. Proposals may vary according to the nature of the study, theoretical perspective(s), and the method(s) of investigation used, but typically include statement of the research purpose, an analytic review of the literature, theoretical framing or conceptual framework, the problem or hypothesis, the research questions, data collection strategies and methods, and procedures for data analysis. In many cases the student will collect pilot data prior to the dissertation proposal hearing, and these data shall be included in the proposal and reported to provide “proof-of-concept” background to demonstrate the likely applicability of the proposed methods.

Doctoral dissertation proposals shall be examined via a hearing of not more than three faculty, all of whom must be members of the Teachers College specially approved faculty as described in the policies for the nomination and appointment of the defense committee. The sponsor of the dissertation must be an approved dissertation sponsor in the student's department/program. Ph.D. students are expected to defend the Ph.D. proposal by the 4th year.

IRB Review

After the successful Dissertation Proposal Hearing, the student applies for Institutional Review Board (IRB) approval.

Dissertation and Oral Defense

The dissertation submitted in partial fulfillment of the Ph.D. requirements is an extensive written document reporting an empirical investigation of an issue in educational neuroscience. The dissertation's contribution to the field must comprise a contribution to theoretical understanding, and empirical data that relate to an important subject in educational neuroscience.

The dissertation oral defense is conducted to determine the acceptability of the dissertation and to assess the need for any revisions prior to deposit. The oral defense is conducted by a final defense committee that is composed of five members, three of whom must be inside examiners (holding a formal appointment or approved as a dissertation sponsor in the doctoral candidate's home department or program), and two of whom must be outside examiners. The inside members must be GSAS approved sponsors. Any exceptions to this composition must be reviewed by the Dean of GSAS.

During the dissertation defense, questioning begins with the outside readers, followed by the

inside committee members (one of whom is the Dissertation Defense Moderator), and finally the sponsor. However, this order is rarely strictly maintained so that examiners can ask follow-up questions. Following questions and discussion, the student will be asked to allow the committee a period of privacy while they reach a decision with regard to the manuscript itself, the student's presentation of the study, and their response to their questions and comments.

The dissertation is evaluated on the basis of:

- the student's knowledge, analysis, and synthesis of relevant literature;
- the creative application of knowledge to the question under consideration;
- understanding of the relevant theoretical frameworks governing the field and methods of inquiry;
- evidence of skill in implementing brain imaging or other research techniques for collection and analysis of pertinent data;
- findings and conclusions that are solidly based on the data collected;
- and consideration of implications for practice and/or further research in educational, clinical or social domains, from a neuroscientific perspective.

The document must also be clearly organized and written in accordance with the accepted form for the type of research undertaken.

C) Please use the table below to list the required, elective, and selective coursework.

“Selective” coursework consists of a list of courses from which a student must select a minimum number of credits (but need not take all courses on the list).

REQUIRED Foundational Courses Minimum number of required credits = 18	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
Student must take all of these courses	TC	BBSN 4001	Foundations in Neuroscience 1: Anatomy & Physiology	Not at all online	3
	TC	BBSN 4002	Foundations in Neuroscience 2: Systems Neuroscience	Not at all online	3
	TC	BBSN 5003	Cognitive Neuroscience	Not at all online	3
	TC	BBSN 5019	Human Functional Neuroanatomy	Partially online	3
	TC	BBSN 4005	Neuroscience Research Methods	Partially online	3
	TC	BBSN 5007	Neuroscience Applications to Education	Not at all online	3
REQUIRED Lab Experiences Minimum number of required credits = 12	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits

	TC	BBSN 6904	Research and independent study Minimum 3 credits x 4 semesters	Not at all online	12
REQUIRED Empirical Work towards the Dissertation Minimum number of required credits = 12	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
	TC	BBSN 6940/6941	Supervised Research Minimum 3 credits x 3 semesters	Not at all online	9
	TC	BBS 7500	BBS 7500 Dissertation Seminar	Not at all online	3
REQUIRED Experimental and Lab Methods Minimum number of selective credits = 6	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
Student must take two of these courses	TC	BBSN 5000	EEG Lab Methods	Not at all online	3
	TC	BBSN 5022	Eye-tracking Lab Methods	Not at all online	3
	TC	BBSR 5195	Advanced Applied Physiology Laboratory	Not at all online	3
REQUIRED Grant Writing/Academic Writing Minimum number of selective credits = 3	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
Student must take one of these courses	TC	BBS 6042	Grantwriting: From a Fundable Idea Through Review	Partially online	3
	TC	HBSS 6500	Research Grant Writing Health and Behavior Studies	Partially online	3
ELECTIVE COURSES Minimum number of selective credits = 12	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
Students will take elective courses within their own specialization area, reflecting their chosen research direction, to be selected under advisement with their sponsor. A minimum of 12 credits / 4 courses must be taken within the selected specialization. Examples of relevant coursework are as follows:					
	TC	BBSN 5010	Neuroscience of Reading	Not at all online	3

Student interest area: Neuroscience of Language & Literacy (12 credits required)	TC	BBS 4032	Neuroscience of Speech and Language	Not at all online	2
	TC	HUDK 5090	Psychology of Language & Reading	Not at all online	3
	TC	HUDK 5024	Language Development	Not at all online	3
	TC	HBSK 4074	Development of Reading Comprehension	Not at all online	3
	TC	C&T 6532	Seminar in reading/language arts and related research	Not at all online	3
	TC	A&HL 4030	Second Language Literacy Development	Not at all online	3
Student interest area: Neuroscience of Cognition & Learning (12 credits required)	TC	BBSN 5070	Developmental Cognitive Neuroscience	Not at all online	3
	TC	BBSN 5080	Social and Affective Neuroscience	Fully online	3
	TC	HUDK 4029	Human Cognition & Learning	Not at all online	3
	TC	HUDK 5011	Cognition of Social and Emotional Learning	Not at all online	3
Student interest area: Neuroscience Applications to Educational / Social Policy (12 credits required)	TC	BBSN 5152	Neuroscience, Ethics, and the Law	Fully online	3
	TC	BBSN 5193	Neuroscience of Adversity	Not at all online	3
	TC	EDPA 6013	Early Childhood Development and Education/ Integrating Research & Policy Perspectives	Not at all online	3
	TC	EDPA 4048	Education Policy Analysis and Implementation	Not at all online	3
	TC	C&T 4615	Young Children and Social Policy: Issues and Problems	Not at all online	3
BREADTH COURSES Minimum number of selective credits = 12	School	Course Number (indicate if course is NEW)	Course Title & Instructor	Indicate whether course is fully, partially, or not at all online	# of Credits
All doctoral students must take at least one course for a minimum of 3 points in each of the following four areas: Cognitive Basis of Behavior; Educational Contexts; measurement and Statistics; Coding and Programming. The courses must be other than courses required as part of the program core. Students should consult with their advisors about whether specific courses meet program requirements. Examples of suitable courses are included below, but students may also consult the TC course catalog for other examples. Courses used to fill the Breadth/Foundation course requirements may not be used to fulfill requirements in another area.					
Cognitive Basis of Behavior	TC	CCPX 5020	Cognition, Emotion, and Culture	Not at all online	3
	TC	HBSK 5096	Psychology of Memory	Not at all online	3

(Students must take at least one of these courses)	TC	HUDK 4015	Psychology of Thinking	Not at all online	3
	TC	HUDK 5024	Language Development	Not at all online	3
	TC	HUDK 5025	Spatial Thinking	Not at all online	3
	TC	HUDK 5030	Visual Explanations	Not at all online	3
	TC	HUDK 5090	Psychology of Language and Reading	Not at all online	3
Educational Contexts (Students must take at least one of these courses)	TC	ORLD 4053	Facilitating Adult Learning	Not at all online	3
	TC	A&HF 4192	Ethics and Education	Not at all online	3
	TC	C&T 4052	Designing Curriculum and Instruction	Not at all online	3
	TC	C&T 4078	Curriculum and Teaching in Urban Areas	Not at all online	3
	TC	C&T 5037	Literacy, Culture, and the Teaching of Reading	Not at all online	3
	TC	C&T 4130	Critical Perspectives in Elementary Education	Not at all online	3
	TC	C&T 4145	Critical Perspectives in Secondary Education	Not at all online	3
Measurement & Statistics (Students must take at least one of these courses)	TC	HUDM 5059	Psychological Measurement	Fully online OR Not at all online	3
	TC	HUDM 6051	Psychometric Theory	Fully online OR Not at all online	3
	TC	HUDM 6055	Latent Structure Analysis	Fully online OR Not at all online	3
	TC	HUDM 5122	Applied Regression Analysis (Advanced)	Fully online OR Not at all online	3
	TC	HUDM 5123	Linear Models and Experimental Design (Advanced)	Fully online OR Not at all online	3
	TC	HUDM 5126	Linear Models and Regression Analysis	Fully online OR Not at all online	3
Coding & Programming (Students must take at least one of these courses)	TC	MSTU 4031	Object-Oriented Theory and Programming	Not at all online	3
	TC	BBSR 5151	Introduction to the Analysis of Biomechanical Signals	Not at all online	3
	TC	HUDM 5026	Intro to Data Analysis in R	Fully online OR Not at all online	3

D) Provide a sample schedule showing the courses the students will take during each term of the program. For elective or selective courses, simply enter “elective” or “selective.”

Example pathways for students through the program 1:
Student with Masters in Neuroscience & Education

A student who has already completed the extant M.S. degree in Neuroscience and Education at

Teachers College will be eligible to apply 30 credits from that experience to the requirements for the Ph.D., and will be required to complete 45 credits of graduate study plus all other program requirements as outlined above. Such a pathway through the program could proceed as follows:

Previously completed credits that can be applied to Ph.D. requirements:

BBSN 4001 Foundations in Neuroscience 1: Anatomy & Physiology	3
BBSN 4002 Foundations in Neuroscience 2: Systems	3
BBSN 4005 Neuroscience Research Methods	3
BBSN 5007 Neuroscience Applications to Education	3

[All of these are required for the M.S. degree, and would have been completed by this hypothetical applicant]

BBSN 5003 Cognitive Neuroscience	3
BBSN 5019 Human Functional Neuroanatomy	3

[These two courses are electives in the M.S. degree and, together with the 3 courses above, would meet the Foundational Courses requirement for the proposed Ph.D.]

BBSN 5000 EEG Lab Methods	3
BBSN 5022 Eye-tracking Lab Methods	3

[These two courses are also elective in the M.S. degree, and together would meet the Experimental and Lab Methods requirement for the proposed Ph.D.]

HUDM 5122 Applied Regression Analysis (Advanced)	3
A&HF 4192 Ethics and Education	3

[These two courses are commonly taken as breadth courses by students in the M.S. degree program]

Total previously-completed credits counted towards Ph.D. requirements: 30

Remaining credits required for the Ph.D.: 45

Ph.D. requirements met or partially met:

Neuroscience Foundational Courses	18/18 credits
Experimental and Lab Methods	6/6 credits
Breadth Requirement; Measurement & Statistics	3/3 credits
Breadth Requirement; Educational Contexts	3/3 credits

Given these 30 transfer credits, and assuming full time enrollment in the program, the pathway to the Ph.D. could be completed within a 3-year timeframe, as follows.

Semester 1 (Fall) Year 1			
Course Number & Title	Credits	New?	Prerequisites
BBSN 5080 Social and Affective Neuroscience [Elective: 1/4]	3	No	No

HUDM 5026 Intro to Data Analysis in R [Breadth: Programming]	3	No	No
BBSN 6904 Research and Independent Study	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 2 (Spring) Year 1			
Course Number & Title	Credits	New?	Prerequisites
BBSN 6904 Research and Independent Study	3	No	No
BBSN 5070 Developmental Cognitive Neuroscience [Elective: 2/4]	3	No	No
BBS 6042 Grantwriting: From a Fundable Idea Through Review	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 3 (Summer) Year 1			
Course Number & Title	Credits	New?	Prerequisites
BBSN 6940 Supervised Research	3	No	No
BBSN 5010 Neuroscience of Reading [Elective: 3/4]	3	No	No
TOTAL CREDITS FOR SEMESTER:	6		
Semester 4 (Fall) Year 2			
Course Number & Title	Credits	New?	Prerequisites
BBSN 6904 Research and Independent Study	3	No	No
HUDK 5024 Language Development [Elective: 4/4]	3	No	No
CCPX 5020 Cognition, Emotion, and Culture [Breadth: Cognitive Bases]	3	No	No
Certification Exam / Qualifying Paper			
TOTAL CREDITS FOR SEMESTER:	9		
Semester 5 (Spring) Year 2			
Course Number & Title	Credits	New?	Prerequisites
BBSN 6941 Supervised Research	3	No	No
BBS 6042 Grantwriting: From a Fundable Idea Through Review	3	No	No
BBS 7500 Dissertation Seminar	3	No	Yes (all prior degree requirements must be met before registering for departmental Dissertation Seminar)
Proposal defense			
TOTAL CREDITS FOR SEMESTER:	9		
Semester 6 (Summer) Year 2			
Course Number & Title	Credits	New?	Prerequisites

BBSN 6940 Supervised Research	3	No	No
TOTAL CREDITS FOR SEMESTER:	3		
Semester 7 (Fall) Year 3			
Course Number & Title	Credits	New?	Prerequisites
BBS 8900 Departmental Dissertation Advisement	0	No	Yes (Successful proposal hearing and all prior degree requirements)
TOTAL CREDITS FOR SEMESTER:	0		
Semester 8 (Spring) Year 3			
Course Number & Title	Credits	New?	Prerequisites
TI 8900 Dissertation defense	0	No	Yes (Can only be taken in the semester of dissertation defense; all other degree requirements must be met)
TOTAL CREDITS FOR SEMESTER:	0		

Total previously-completed credits counted towards Ph.D. requirements:

30

Total Credits

75

Example pathways for students through the program 2: Student from Non-Educational Neuroscience Background

Students who do not enter the Ph.D. directly from the current M.S. program in Neuroscience & Education may already have a master's degree or may come from a suitable undergraduate program. Assuming full time enrollment in the program and zero transfer (or previously-completed) credits, the pathway to the Ph.D. could be completed within a 5-year timeframe, as follows.

Semester 1 (Fall) Year 1			
Course Number & Title	Credits	New?	Prerequisites
BBSN 4001 Foundations in Neuroscience 1: Anatomy & Physiology [Foundational 1/6]	3	No	No
BBSN 4005 Neuroscience Research Methods [Foundational 2/6]	3	No	No
BBSN 6904 Research and Independent Study [Lab Experience 1/4]	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 2 (Spring) Year 1			
Course Number & Title	Credits	New?	Prerequisites
BBSN 4002 Foundations in Neuroscience 2: Systems [Foundational 3/6]	3	No	Yes (BBSN 4001)

BBSN 5003 Cognitive Neuroscience [Foundational 4/6]	3	No	No
BBSN 6904 Research and Independent Study [Lab Experience 2/4]	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 3 (Summer) Year 1			
Course Number & Title	Credits	New?	Prerequisites
BBSN 5000 EEG Lab Methods [Experimental & Lab Methods 1/2]	3	No	No
TOTAL CREDITS FOR SEMESTER:	3		
Semester 4 (Fall) Year 2			
Course Number & Title	Credits	New?	Prerequisites
HUDM 4122 Probability and Statistical Inference [Breadth 1/4: Measurement/Stats]	3	No	No
BBSN 6904 Research and Independent Study [Lab Experience 3/4]	3	No	No
HUDK 4029 Human Cognition & Learning [Elective 1/4]	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 5 (Spring) Year 2			
Course Number & Title	Credits	New?	Prerequisites
BBSN 5019 Human Functional Neuroanatomy [Foundational 5/6]	3	No	No
BBSN 5007 Neuroscience Applications to Education [Foundational 6/6]	3	No	No
BBSN 6904 Research and Independent Study [Lab Experience 4/4]	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 6 (Summer) Year 2			
Course Number & Title	Credits	New?	Prerequisites
BBSN 5022 Eye-tracking Lab Methods [Experimental & Lab Methods 2/2]	3	No	No
TOTAL CREDITS FOR SEMESTER:	3		
Semester 7 (Fall) Year 3			
Course Number & Title	Credits	New?	Prerequisites
BBSN 6940 Supervised Research	3	No	No
BBSN 5070 Developmental Cognitive Neuroscience [Elective 2/4]	3	No	No
C&T 4052 Designing Curriculum and Instruction [Breadth 2/4: Educational Contexts]	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 8 (Spring) Year 3			

Course Number & Title	Credits	New?	Prerequisites
BBSN 6941 Supervised Research	3	No	No
BBS 6042 Grantwriting: From a Fundable Idea Through Review	3	No	No
HUDK 4029 Human Cognition and Learning [Breadth 3/4: Cognitive Bases]	3	No	No
TOTAL CREDITS FOR SEMESTER:	9		
Semester 9 (Fall) Year 4			
Course Number & Title	Credits	New?	Prerequisites
BBSN 6940 Supervised Research	3	No	No
BBSN 5080 Social and Affective Neuroscience [Elective 3/4]	3	No	No
HUDM 5026 Intro to Data Analysis in R [Breadth 4/4: Coding & Programming]	3	No	No
Certification Exam/Qualifying paper			
TOTAL CREDITS FOR SEMESTER:	9		
Semester 11 (Spring) Year 4			
Course Number & Title	Credits	New?	Prerequisites
BBS 7500 Dissertation Seminar	3	No	Yes (all prior degree requirements must be met before registering for departmental Dissertation Seminar)
Proposal defense			
TOTAL CREDITS FOR SEMESTER:	3		
Semester 12 (Summer) Year 4			
Course Number & Title	Credits	New?	Prerequisites
BBSN 5010 Neuroscience of Reading [Elective 4 of 4]	3	No	No
TOTAL CREDITS FOR SEMESTER:	3		
Semester 13 (Fall) Year 5			
Course Number & Title	Credits	New?	Prerequisites
BBS 8900 Departmental Dissertation Advisement	3	No	Yes (Successful proposal hearing and all prior degree requirements)
TOTAL CREDITS FOR SEMESTER:	3		
Semester 14 (Spring) Year 5			
Course Number & Title	Credits	New?	Prerequisites

TI 8900 Dissertation Defense	0	No	Yes (Can only be taken in the semester of dissertation defense; all other degree requirements must be met)
TOTAL CREDITS FOR SEMESTER:	0		

Total Credits

75

- E) Please provide the typical number of weeks in the Academic Year for this program, counting Fall and Spring semesters. Note that regulations define a “week” as any 7-day period in which ANY instructional activity occurs; this includes classes, discussion sections, labs, exam periods, and study periods. A single activity in a given week counts as a week of school. Virtually the only weeks not to be counted are orientation week and vacation weeks.**

Fall semester – 15 weeks

Spring semester – 15 weeks

Summer Session A or B – 6 weeks

Typical number of weeks per year = 36

- F) Please also indicate the number of weeks IN TOTAL that it would take a typical full-time student to complete the program. For example, for a one-year MS program, which can typically be completed in Fall and Spring terms, you would likely provide the same answer you gave immediately above (for weeks in the academic year). If a program requires 2 years of study, then you would multiply the number of weeks in the academic year by 2. If summer terms are included, please include 6-10 weeks, as appropriate, for each summer term.**

Fall and spring semesters – 10; 10 semester x 15 weeks = 150 weeks

Summer sessions – 3; 3 sessions x 6 weeks = 18 weeks

Typical number of weeks to complete the program = 168 Weeks

- G) Does the proposed program rely to a significant extent on courses that are offered by other parts of the University? If so, identify those courses and confirm that you have discussed course availability and capacity with the unit in which those courses are housed.**

Not applicable.

- H) For any new courses to be developed for this program, provide a draft syllabus and include information on when the courses have been or will be approved by the appropriate Committee(s) on Instruction.**

Not applicable. No additional courses are planned.

- I) Indicate whether course credits earned in the proposed program can also be counted toward another degree or certificate.**

Courses may apply to the Master of Science in Neuroscience and Education.

4) Library Resources

- A) Have you consulted with a library subject specialist about what library resources (e.g., books, databases, journals, streaming video or audio, data sets, etc.) or other support (research consultations, library instruction, etc.) you anticipate needing for this program? If yes, please list those resources expected below.**

The Gottesman Libraries at Teachers College have been consulted, and they already provide a comprehensive array of library resources and support services relevant to educational neuroscience. As part of the wider CU Library system, students will have full access to databases including CLIO, PubMed, PsycINFO, and ERIC. TC maintains current subscriptions to key journals including *Neuroscience and Education*, *Mind, Brain, and Education*, and *Journal of Educational Neuroscience*. Electronic access to relevant books and e-books via platforms like Springer, Wiley, and Oxford University Press is available.

To facilitate student research, the Gottesman Libraries offers instructional sessions on literature searching, citation management tools, and database navigation. One-on-one research consultations are also available with subject librarians to assist students in navigating relevant literature.

5) Faculty

- A) Provide the name of the program director and the percent of time this individual will dedicate to leadership of the program.**

Karen Froud, Associate Professor of Neuroscience & Education – 25% FTE

- B) Indicate if the program will require the hiring of new faculty either at its inception or by the time it reaches steady state. If so, indicate the number of new faculty it will require, divided between full- and part-time, the subjects they will teach and the year(s) of their initial appointment.**

No new faculty will be required.

6) Students

- A) Describe the requirements for admission to the program.**

- i. Masters degree in a relevant field: education, neuroscience, or one of the related disciplines
- ii. Three strong letters of recommendation from scholars
- iii. Personal statement
- iv. Writing sample

Applicants for admission will be considered holistically and will take account of three main criteria: academic performance to date; potential for contributing to research and scholarship; and persistence in and commitment to educational success. These criteria can be evaluated in many ways and will include review of multiple indicators, including but not limited to GPA, written communication skills, progression of academic performance over time, research activities on and off campus, relevant work experience, scholarly engagement beyond coursework, indices of leadership, evidence of persistence and commitment, community engagement or service, educational, geographical, and cultural background. Applicants should have engaged with a potential advisor during the course of their admissions review.

- B) Provide the anticipated enrollments of students in the program's first five years, and ultimate enrollment once it reaches steady state. Indicate the number of years it will take to grow the program to its full size.**

Anticipated admission rates and cohort sizes are as follows:

Year 1: 1-2 students

Year 2: 0-1 students (total 1-3)

Year 3: 0-2 students (total 1-5)

Year 4: 0-1 students (total 1-6)

Year 5: 0-2 students (total 1-7, given 5-year time to completion for first cohort; 2-6 students would represent “steady state”, dependent on available support).

- C) If this is a dual-degree program, either between schools of the University or a joint program in collaboration with another institution, describe the support the students will receive from the participating schools or institutions and how the program will ensure that they have access to the courses and resources they will need to complete its requirements.**

Not applicable.

- D) Describe the types of positions for which the program will qualify its students.**

The Ph.D. in Educational Neuroscience will foster a unique skill set that combines advanced analytical techniques with a deep understanding of the cognitive and neural processes underlying learning and education. Graduates are therefore poised to make significant contributions to policy, research, and practice in the evolving field of educational neuroscience. Hence, graduates of the Ph.D. program would be equipped to pursue academic positions in both education and neuroscience departments, direct research focused on improving educational outcomes for diverse populations, become high-level policy advisors, hold key administrative and leadership posts in state education systems, lead evaluations of educational interventions or curricula, specialize in program development and implementation in educational domains, or work in industry positions operating at the intersections of scientific research and educational applications. However, we anticipate the majority becoming academic scholars and researchers.

- 7) Online Delivery. If the proposed program will have an on-line component, answer the following questions.**

Not applicable.

- A) Confirm whether the online and in-person programs will be identical with respect to content, admission criteria, student learning outcomes, and assessment methods; and if not, indicate how they will differ.
- B) What percentage of the program will be offered online?
- C) Please describe:
- a. The on-line platform you will be using to teach this program;
 - b. Student support resources that will be available to the on-line students;
 - c. How you will authenticate the identity of the on-line students in the program.

8) Finances

- A) Provide an estimate of the new revenues the program will generate in each of its first three years, and when it will reach steady state if that will occur in a later year. In the case of a dual degree program, indicate how those revenues will be shared.**

No additional revenue.

- B) Provide an estimate of the expenses the program will require in each of its first three years, and when it will reach steady state if that will occur in a later year. Include a breakdown of those expenses by type, using the following categories: 1) new faculty; 2) additional administrative personnel; 3) on-line systems and technical support, when appropriate; and 4) other OTPS expenses.**

No additional costs.

- C) Show the net surplus or deficit produced by the program in each of its first three years, and when it will reach steady state if that will occur in a later year.**

Not applicable.

9) Evaluation

- A) Describe how the quality of the program will be evaluated, including the frequency of the reviews and who will conduct them. Describe how student input will be obtained as part of the evaluation of the program.**

Annual reviews of Ph.D. students and candidates will be conducted each year; these reviews will allow for reflection on both individual students and on the program itself. Outcomes will be assessed through analyses of the indicators mentioned below in the Evaluation Plan. Annual reviews, including a student self-assessment, with each student will provide an opportunity for program faculty to ensure that students are showing progress in their ability to generate new knowledge and they are making timely progress toward the degree. In cases where there is concern about adequate progress, the advisor/sponsor (with consultation from the rest of the program faculty) will provide feedback and recommendation for goals to be accomplished for the upcoming year, including specific deadlines for goals to be accomplished.

The Department of Biobehavioral Sciences (BBS) regularly conducts programmatic review discussions with program faculty, program directors and the department chair. Program directors maintain responsibility for conducting program-level assessments based on the mission and goals of the program, student enrollments, retention, graduation rates, and alumni job placements. The Department Chair conducts yearly evaluations with Program Directors to consider whether programmatic goals are being met and to discuss timely interventions and strategic adjustments as needed. Based on the data and evaluation, we will work as a faculty group to set realistic goals that align with the overall objectives of the program. If needed, specific action plans can be developed that outline the steps, resources, and timeline needed to achieve identified goals. Such planning will account of the resources, budget, and personnel available. The identified strategies will be implemented, and progress will continue to be monitored iteratively. This may include modifying or enhancing existing programming, introducing new initiatives, or working with specific students on an individual basis.

Since the program goals delineated below are clearly defined and measurable, we will be able to assess the effectiveness of the program in achieving its goals and objectives. In our evaluation process, ongoing assessment will ensure that the program is continuously improving. We will incorporate feedback from students and faculty to ensure that the program is meeting needs and expectations, and to identify areas for improvement. Since ongoing monitoring and mentoring of students to achieve their goals is already part of our purview at the doctoral level, we are well-placed to maintain program quality.

- B) Include a learning outcomes and assessment plan for the proposed program, using the below template. Examples can be found here:**

<http://academicprograms.columbia.edu/assessment-student-learning>

Program Goals for Student Learning	Assessment of Learning Outcomes
Please list overall programmatic goals below.	Please indicate primary measures of student learning, which may include direct measures (e.g., coursework) and indirect measures (e.g., alumni outcomes).
Goal 1: Students will demonstrate knowledge of content in the field of neuroscience	Measure 1: Percentage of students who maintain a B or higher grade in the Foundational Coursework Sequence Criterion: 100% of Ph.D. Students will maintain a B or higher grade in the Foundational Coursework sequence Measure 2: Percentage of students who successfully defend a dissertation that contributes knowledge to the field of study. Criterion: 90% of Ph.D. students will successfully defend the doctoral dissertation
Goal 2: Students will demonstrate knowledge of the use of theory from their research focus, and apply it to research in the field of educational neuroscience	Measure 1: Percentage of students who satisfactorily completed the Certification Examination by demonstrating their content knowledge in two of three major disciplinary domains. Criterion: 90% of Ph.D. students will satisfactorily complete the Certification Examination with a rating of "Pass" or higher Measure 2: Percentage of students who satisfactorily completed the Certification Examination by demonstrating their content knowledge in two of three major disciplinary domains. Criterion: 90% of Ph.D. students will satisfactorily complete the Comprehensive Examination with a rating of "Pass" or higher. Measure 3: Percentage of students who successfully defend a dissertation that contributes knowledge to the field of study. Criterion: 90% of Ph.D. students will successfully defend the doctoral dissertation
Goal 3: Students will make research and/or professional contributions during their program	Measure 1: Percentage of students who, prior to graduation, have contributed to one or more of the following research and professional activities: • Publication of a manuscript for a peer reviewed or professional journal; this may be singly or jointly authored • Conference presentation, also singly or jointly authored • Leadership of a graduate-professional association

	• Participation in review of manuscripts or conference proposals • Application for grant funding from federal and/or foundational funding sources Criterion: 90% of Ph.D. graduates will engage in one or more of the above research and/or professional activities prior to graduation
Goal 4: Students will engage in scientific communication and/or pedagogy within their discipline, in support of their home program and community	Measure 1: Percentage of students who, prior to graduation, have contributed to one or more of the following: Course assistantship or independent teaching of a course in the M.S. Program in Neuroscience & Education Volunteer outreach work in support of scientific communication, such as Brain Awareness Week, Columbia University Neuroscience Outreach, Saturday Science, or other relevant programs Utilization of technology, such as social media, podcasts, videos, to communicate scientific work to a wider audience Criterion: 90% of Ph.D. graduates will engage in one or more of the above outreach or communication activities prior to graduation
Goal 5: Students will complete all course and dissertation requirements within a reasonable time-to-degree	Criterion: 90% of Ph.D. students will complete the Ph.D. degree requirements within 5 years of matriculation
Goal 6: Upon graduation, alumni will be gainfully employed as faculty, researchers, postdocs, industry professionals, or in other positions reflecting their expertise and level of training	Criterion: 90% of Ph.D. graduates will be employed in a field-related position

10) External Review for NEW Master's and Doctoral Programs.

Please provide the names of experts in the field of the program at institutions outside of New York State. Proposed reviewers should be specialists in the area of the program but should not have had an association with Columbia that would compromise the independence of their evaluations. NYSED considers that a conflict of interest exists if a proposed reviewer:

- has had an appointment at the University or is related to someone who has;
- was previously consulted about the development of the proposed program; or
- has a professional relationship with someone at the University such as collaborating on externally funded research and publications.

For new master's programs, the University must supply one external review; for doctoral programs, two external reviews are required. For this reason, please identify 3 potential reviewers for master's proposals, and 5 potential reviewers for doctoral proposals.

For each potential reviewer, include institutional affiliation, contact information and a link to the individual's website which lists his/her educational credential (including where his/her degrees were received) and employment history. If full information on degrees and employment cannot be viewed from the website, NYSED may require that we supply them with the individual's CV. *Please note that this requirement does not apply to new DUAL or JOINT degree programs, or to new BACHELOR's programs; we do not need to submit external reviews for these programs.*

Proposed Program Reviewers:

- **John Gabrieli** – director of the Athinoula A. Martinos Imaging Center at the McGovern Institute. He is an Investigator at the Institute, with faculty appointments in the Department of Brain and Cognitive Sciences and the Institute for Medical Engineering & Science, where he holds the Grover Hermann Professorship. <https://gablabs.mit.edu/john-gabrieli/>
- **Usha Goswami** - Professor of Cognitive Developmental Neuroscience; Director, Centre for Neuroscience in Education; Fellow, St John's College, Cambridge. <https://neuroscience.cam.ac.uk/member/ucg10/>
- **Chloe Marshall** - Professor in Psychology, Language and Education at the UCL Institute of Education, University College London; Director of the Program in Educational Neuroscience. <https://profiles.ucl.ac.uk/14497>
- **David Poeppel** – Professor of Psychology and Neural Science, New York University; Co-Director, Center for Language, Music, and Emotion, Max Planck Institute; Director and CEO, Ernst Strüngmann Institute for Neuroscience. <https://as.nyu.edu/faculty/david-poeppel.html>
- **Franck Ramus** – Faculty and Director of Research, Laboratoire de Sciences Cognitives et Psycholinguistique, École Normale Supérieure, Paris. <https://lscp.dec.ens.fr/fr/member/663/franck-ramus>

ATTACHMENT: Letter of support from Daphna Shohamy (Director and CEO of Columbia's Zuckerman Institute) and Carol Ann Mason (Chair of Interschool Planning, Zuckerman Institute)

COLUMBIA | Zuckerman Institute
MORTIMER B. ZUCKERMAN MIND BRAIN BEHAVIOR INSTITUTE

July 28, 2022

Karen Froud, Ph.D.
Program Director, Neuroscience & Education
Teachers College
Columbia University

Dear Professor Froud,

Thank you for sharing with us the outline of the proposed new Ph.D. program at Teachers College, to be offered in the field of Educational Neuroscience.

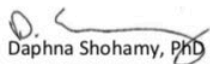
We have considered the program structure and offerings, as well as the objectives of the program, the students it will likely serve, and the quality of the proposed research training. The current Master of Science program in Neuroscience & Education at TC provides a valuable substrate for the proposed Ph.D., and we support the development of the Ph.D. program as a timely and needed step. Indeed, Teachers College is uniquely well-positioned to offer an applied neuroscience program of this nature.

Given our respective positions as Zuckerman Institute Chair of Interschool Planning (and former co-director of the Neurobiology & Behavior graduate program), and Associate Director of the Zuckerman Institute, we are well-placed to evaluate whether your proposed Ph.D. program would constitute a direct overlap with our doctoral programs in related domains. To the contrary, we believe that the proposed program would be complementary to our current offerings and would provide many opportunities for cross-talk and collaboration between our programs.

The Doctoral Program in Neurobiology and Behavior currently includes more than 150 mentors, across Columbia's campuses, and administering such a large program means that we have a good sense of the directions for research that are valued by students. We have observed an increasing interest in our entering PhD students who focus on the basic science of, for example, cognition and brain imaging, to relate their work to topics such as the effect of technology on children's brain health and thus would benefit from your program's activities. In turn, your students could benefit from our courses, seminar series, and faculty advisement. A Ph.D. in Educational Neuroscience at Teachers College would also be consistent with the values and goals of other various initiatives in neuroscience at Columbia. For example, your TC program could directly feed into the program for Presidential Scholars in Society and Neuroscience; could support a pathway forward for graduates from the newly-proposed undergraduate program in Cognitive Neuroscience at Barnard and Columbia; and would provide opportunities to build the kind of trans-campus cooperation that has been a hallmark of neurosciences at Columbia and our philosophy at the Zuckerman Institute.

We therefore offer our support of this program proposal, and we look forward to the many opportunities for collaboration and excellence in research training that it will provide.

Best regards,


Daphna Shohamy, PhD
Associate Director, Zuckerman Institute


Carol Ann Mason, PhD
Chair of Interschool Planning, Zuckerman Institute

Proposed: April 10, 2026

University Senate

Adopted: April 10, 2026

73-0-0: In favor-opposed-abstained

RESOLUTION TO ESTABLISH THE TITLE AND TRACK OF PROFESSOR OF INSTRUCTION

WHEREAS legitimate programmatic needs continue to exist across the University for renewable full-time non-tenure-track faculty positions and service; and

WHEREAS the Lecturer-in-Discipline community has long been a critical part of Columbia University, actively contributing to teaching, advising, and administrative efforts; and

WHEREAS the Office of the Provost, recognizing the crucial academic contributions of this group, has sought review by the University Senate of a proposal for the creation of a new three-tiered Professor of Instruction title and track that includes Assistant, Associate and Professor of Instruction ranks for current and future faculty in renewable, non-tenure-eligible positions; and

WHEREAS this new title and track signify the high value the University places on its teaching mission and the role of the current Lecturer-in-Discipline faculty in fulfilling it;

THEREFORE, BE IT RESOLVED that the University Senate approve the establishment of the Professor of Instruction title and track as a non-tenure-track faculty appointment with a renewable stated term comprised of the following three tiers:

- **Assistant Professor of Instruction:** Entry-level, requires PhD (or its professional equivalent e.g., JD), a minimum of seven years of teaching before qualifying for a major review to be considered for promotion to the next rank of Associate Professor of Instruction. The major review for promotion must take place by the eighth year of service.
- **Associate Professor of Instruction:** Requires PhD (or its professional equivalent e.g., JD), a minimum of eight years of teaching, and if the individual is an external hire, the passing of the major review must occur before the end of the first year of appointment.
- **Professor of Instruction:** Requires PhD (or its professional equivalent e.g., JD), a minimum of twelve years of teaching, substantial evidence of not just pedagogical excellence but also academic leadership, and if the individual is an external hire, the passing of the major review must occur before the end of the first year of appointment.

BE IT FURTHER RESOLVED that prior to a major review in year eight and promotion to Associate Professor of Instruction, Assistant Professors of Instruction are expected to be reviewed within years 1 of counted service (Confirming Review), 3 (Developmental Review), and 5 (Critical Review), just as Lecturers-in-Discipline currently are expected to complete in schools such as Arts and Sciences; and

BE IT FURTHER RESOLVED that metrics for promotion of Professor of Instruction from one rank to the next are defined at the school level. Evidence of excellence in teaching, recognition in pedagogical expertise and promise and future trajectory, both in the classroom and as an academic leader, are standard metrics for evaluation. Faculty on this track are expected to pursue professional development and move from Assistant Professor of Instruction to Associate Professor of Instruction; schools are expected to support the professional development of faculty on this track. Should an individual not pass the major review for promotion, the school is expected to issue a letter of nonrenewal within the period of notice commensurate with the years of service; and

BE IT FURTHER RESOLVED that there is no absolute requirement for progression from Associate Professor of Instruction to Professor of Instruction; and

BE IT FURTHER RESOLVED that in addition to the substantive reviews that are held to determine promotion to a higher rank, schools will continue to conduct continuing reviews at five-year intervals (with either a recommendation for an additional term, or a recommendation for non-renewal) to ensure ongoing pedagogical excellence. Review criteria for continuing reviews are determined at the school-level. If the review for promotion from Associate Professor of Instruction to Professor of Instruction occurs before five years pass after the promotion from Assistant Professor of Instruction to Associate Professor of Instruction, the review would count as a continuing review as well and there would be no need for another continuing review for another five years (assuming the promotion to Professor of Instruction is successful); and

BE IT FURTHER RESOLVED that this remain a non-tenure-track instructional appointment with a stated term, should the individual not pass the Confirming Review, Developmental Review, Critical Review, Major Review, or any continuing reviews, they would receive a letter of nonrenewal. Per the Faculty Handbook, a full-time nontenured faculty member whose appointment will not be renewed beyond its stated term is entitled to clear and unambiguous notice of nonrenewal in writing. The notice must be given in advance of the expiration of their appointment along the lines as stipulated in the Faculty Handbook. The sole exception being when an Associate Professor of Instruction does not pass the promotional review to [Full] Professor of Instruction. In such cases, they can be permitted to remain at the Associate tier and continue to be evaluated with continuing reviews; and

BE IT FURTHER RESOLVED that current qualified full-time Lecturers-in-Discipline and Senior Lecturers-in-Discipline with renewable appointments who have been hired through an open search with full clearance have the option of remaining in the Lecturer-in-Discipline/Senior Lecturer-in-Discipline track or transitioning to the Professor of Instruction track with their Dean's approval; and

BE IT FURTHER RESOLVED that the total number of faculty appointments of Professors of Instruction, Professors of Practice, and Full-Time Special Instructional Faculty shall not exceed 30 percent of the total number of the Full-Time Equivalent (FTE) faculty in the Fu Foundation School of Engineering

and Applied Science and similarly across all academic departments in the Faculty of Arts and Sciences , not counting faculty appointments in the School of Professional Studies and the School of the Arts; and

BE IT FURTHER RESOLVED that prior to making appointments in the Professor of Instruction track to new faculty within the School of the Arts, the School of Professional Studies, and the Professional Schools¹, not including the Fu Foundation School of Engineering and Applied Science, further University Senate action is required in order to address historical exceptions that have been granted on a school-by-school basis without a comprehensive set of guidelines and policies, which are indispensable to maintaining the quality of the University's scholarly and research efforts; and

BE IT FURTHER RESOLVED that the proposal be forwarded to the University Trustees for appropriate action.

BE IT FINALLY RESOLVED that upon Trustee action, the Faculty Affairs, Academic Freedom and Tenure Committee will work together with the Office of the Provost to make the requisite revisions to the Faculty Handbook.

Proponent: Faculty Affairs, Academic Freedom and Tenure Committee

¹ The Faculty Handbook defines the professional faculties as: Architecture, Planning and Preservation, Business, Climate, Engineering and Applied Science, International and Public Affairs, Journalism, Law, and Social Work.

University Senate

Proposed: April 10, 2026

Adopted: April 10, 2026

72-0-0: In favor-opposed-abstained

SUPPLEMENTARY RESOLUTION
TO ESTABLISH THE TITLE AND TRACK OF PROFESSOR OF INSTRUCTION

WHEREAS the Lecturer-in-Discipline community has long been a critical part of Columbia University, actively contributing to teaching, advising, and administrative efforts across campus; and

WHEREAS existing Senior Lecturers in Discipline who have spent more than ten years in the Lecturer-in-Discipline track have demonstrated through rigorous major and ongoing reviews their exceptional value to the university and fulfill a vital role as leaders in its educational mission; and

WHEREAS some existing Senior Lecturers in Discipline in this category may not hold a PhD (or its professional equivalent e.g., JD), making them ineligible for the Professor-of-Instruction title;

THEREFORE BE IT RESOLVED that Senior Lecturers in Discipline not holding a PhD (or its professional equivalent e.g., JD) who were hired through an open search with full clearance and have served in the Lecturer-in-Discipline track for more than ten years as of the date of this resolution are eligible to apply for transition to the Professor-of-Instruction track at the rank of either Associate Professor of Instruction or Professor of Instruction as determined appropriate by their Department Chair and School Dean.

Proponent: Faculty Affairs, Academic Freedom and Tenure Committee

Proposal for a Professor of Instruction Track

The Lecturer-in-Discipline community has long been a critical part of Columbia University, actively contributing to teaching, advising and administrative efforts across campus. To recognize the crucial contributions of this group, the Office of the Provost has proposed for the review of the Faculty Affairs, Academic Freedom and Tenure Committee a **three-tiered Professor of Instruction track that includes Assistant, Associate and Professor of Instruction ranks for current and future faculty in renewable, non-tenure-eligible positions.**

The current Lecturer-in-Discipline (LiD) structure at Columbia is a two-tiered track with progression from the LiD rank to the Senior Lecturer-in-Discipline (SLiD) rank.¹ Reviews occur in year 1 of counted service (Confirming Review), 3 (Developmental Review), 5 (Critical Review), and 7 (Major Review), when the promotion to SLiD in year 8 is possible, though not guaranteed. The Major Review is followed by continuing reviews, usually at four-year intervals.

The new proposed **Professor of Instruction** track remains non-tenure-track faculty appointment with a renewable stated term. What is new is that it would be comprised of the following three tiers:

- **Assistant Professor of Instruction:** Entry-level, requires PhD (or its professional equivalent e.g., JDs), a minimum of seven years of teaching before qualifying for a major review to be considered for promotion to the next rank of Associate Professor of Instruction. The major review for promotion must take place by the 8th year of service.
- **Associate Professor of Instruction:** Requires PhD (or its professional equivalent e.g., JDs), a minimum of eight years of teaching, and if the individual is an external hire, the passing of the major review must occur before the end of the first year of appointment.
- **Professor of Instruction:** Requires PhD (or its professional equivalent e.g., JDs), a minimum of 12 years of teaching, substantial evidence of not just pedagogical excellence but also academic leadership, and if the individual is an external hire, the passing of the major review must occur before the end of the first year of appointment.

¹ An “Associate in Discipline” title exists but is only used for those hired without PhDs and is not a formal part of the current promotional ladder for LiDs.

Reviews and Promotions: Prior to a major review in year 8 and promotion to Associate Professor of Instruction, Assistant Professors of Instruction are expected to be reviewed within years 1 of counted service (Confirming Review), 3 (Developmental Review), and 5 (Critical Review), just as LiDs currently are expected to complete.

Promotion criteria: Metrics for **promotion** of Professor of Instruction from one rank to the next are defined at the school level. Evidence of excellence in teaching, recognition in pedagogical expertise and promise and future trajectory, both in the classroom and as an academic leader, are typical metrics for evaluation. Faculty on this track are expected to pursue professional development and move from Assistant Professor of Instruction to Associate Professor of Instruction; schools are expected to support the professional development of faculty on this track. Should an individual not pass the major review for promotion, the school is expected to issue a letter of nonrenewal with a one-year notice period.

There is no absolute requirement for the progression from Associate Professor of Instruction to Professor of Instruction, though we highly recommend that schools provide the resources for professional development so that individuals can pass that promotional review.

In addition to the substantive reviews that are held to determine promotion to a higher rank, schools will continue to conduct **continuing reviews** at 5-year intervals (with either a recommendation for an additional term, or a recommendation for non-renewal) to ensure on-going pedagogical excellence. Review criteria for continuing reviews are determined at the school-level. If the review for promotion from Associate Professor of Instruction to Professor of Instruction occurs before five years pass after the promotion from Assistant Professor of Instruction to Associate Professor of Instruction, the review would count as a continuing review as well and there would be no need for another continuing review for another five years (assuming the promotion to Professor of Instruction is successful).

As this remains a non-tenure-track instructional appointment with a stated term, should the individual not pass the Confirming Review, Developmental Review, Critical Review, Major Review, or any continuing reviews, they would receive a letter of nonrenewal. Per the Faculty Handbook, a full-time nontenured faculty member whose appointment will not be renewed beyond its stated term is entitled to clear and unambiguous notice of nonrenewal in writing. The notice

must be given in advance of the expiration of their appointment along the lines stipulated in the [Faculty Handbook](#). The sole exception is when an Associate Professor of Instruction does not pass the promotional review to Professor of Instruction. In such cases, they can be permitted to remain at the Associate tier and continue to be evaluated with continuing reviews. However, we strongly encourage Schools to continue to support their pedagogical development so that they can move along the promotional ladder successfully.

Current full-time LiDs and SLiDs with renewable appointments who have been hired through an open search with full clearance will have the option of remaining in the LiD/SLiD track or transitioning to the Professor of Instruction track with their Dean's approval.² LiDs and SLiDs who hold a PhD or its professional equivalent immediately qualify to apply for transfer to the Professor of Instruction track. LiDs and SLiDs who do not hold a PhD (or its professional equivalent) and/or have accrued less than 10 years of teaching experience at Columbia can be considered for a future transfer into the new track if they obtain an EdD or PhD degree. Once the degree has been granted, such faculty may apply for the transfer into the new track. SLiDs who do not hold a PhD (or its professional equivalent), but have accrued 10+ years of teaching experience at Columbia may be considered for the transfer based on their years of experience and the professional development that has occurred over their years of dedicated service to the University.

LiDs/SLiDs will have until the end of the following academic year, once the announcement of the new track is made, to decide whether to move. If they do transition, they would be appointed on a January 1 or July 1 appointment date. The transition from the lecturer structure to the Professor of Instruction track would be along the following lines: current LiDs would transfer to Assistant Professor of Instruction, while Senior LiDs would transfer to either the Associate or Full Professor of Instruction depending on years of experience and on meeting the qualitative metrics of the specific rank. For distinctions between the LiD/SLiD track and the Professor of Instruction track, please see appendix A. One notable difference, for example, is that the LiD/SLiD track allows for LiDs to pass a major review and not be promoted. For Assistant Professors of Instruction, if one passes the Major Review by year 8, one must be promoted.

² The request for the transfer will need to be submitted to the Dean's office, and once the Dean's approval is granted, submitted to the Provost Office for final approval.

New Special Instructional Faculty hires holding a PhD (or its professional equivalent e.g., JDs) with renewable appointments would generally be hired into the Professor of Instruction track at the appropriate rank. Those who are hired at the Associate and Full Professor of Instruction ranks would have to undergo an immediate “major” or advanced review at least by the end of the first year of their appointment.

Once the new track is established, the **Teaching Professor** title that was proposed by the Provost Office in 2023, and then, proposed and adopted by the Senate on November 17, 2023, would be changed to **Teaching Professor with Distinction**. This title would not be part of the promotional track but would be an exceptional honor conferred by Schools to truly extraordinary and highly experienced members of the full-time non-tenure-track teaching faculty who are at the rank of Senior Lecturer in Discipline or Professor of Instruction. Its new name is meant to capture the exceptional honor of the title. The Office of the Provost recommends that Schools utilize a formal nomination process for the Teaching Professor with Distinction title that relies upon detailed dossiers with external recommendations, teaching awards, student letters, and faculty review. Schools should cap this number at 5% of their full faculty. Faculty who have already been nominated and selected for the current Teaching Professor title, would be automatically transferred to the new title of Teaching Professor of Distinction.

Appendix A
Table 1: LiD/SLiD Track

LiD/SLiD Track	Typical Time in Rank	Review Schedule	Promotion Outcome	Appointment Terms
Lecturer- in-Discipline (LiD)	~7 years before Major Review	Year 1: Confirming Year 3 (or 2 in the A&S): Developmental Year 5: Critical Year 7: Major Review	May pass major review but promotion not guaranteed	Non-tenure-track appointment with stated term; renewable based on reviews
Senior Lecturer- in-Discipline (SLiD)	Indefinite; continuing reviews at 4- or 5-year intervals depending on School	Reviews every 4 years post-Major Review, or every 5 years in the A&S	Remain SLiD after promotion; no further promotion required	Non-tenure-track appointment with stated term; renewable with ongoing reviews

Table 2: Professor of Instruction Track

PoI Track	Typical Time in Rank	Review Schedule	Promotion Outcome	Appointment Terms
Assistant Professor of Instruction	~7 years before Major Review	Year 1: Confirming Year 3: Developmental Year 5: Critical By Year 8: Major Review	Must pass major review to be promoted; if not, receive letter of nonrenewal	Non-tenure-track appointment with stated term; failure to pass any review triggers nonrenewal with notice as specified in the faculty handbook
Associate Professor of Instruction	Minimum 4 years before next promotion consideration	Immediate Major Review within 1st year of appointment (if hired at this rank). Reviewed every 5 years (with 6th year as terminal year). For those individuals who do not pass the review, notice of non-renewal needs to be consistent with the schedule specified in the faculty handbook.	Promotion to Full is recommended but not required; failing reviews leads to nonrenewal	Non-tenure-track appointment; renewable with ongoing successful reviews

Professor of Instruction	Indefinite with continuing reviews at 5-year intervals	Immediate Major Review within 1st year of appointment (if hired at this rank). Reviewed every 5 years (with 6th year as terminal year) For those individuals who do not pass the review, notice of non-renewal needs to be consistent with the schedule specified in the faculty handbook.	No further mandatory promotion; failure of any review leads to nonrenewal	Non-tenure-track appointment; renewable with continued demonstrated excellence
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Table 3: Track Comparison

LiD vs. PoI	LiD/SLiD Track	Professor of Instruction Track
Rank	Lecturer-in-Discipline (LiD) → Senior Lecturer-in-Discipline (SLiD)	Assistant Professor of Instruction → Associate Professor of Instruction → Professor of Instruction
Typical Time in Rank	~7 years before major review for LiD; SLiD indefinite with 4-year reviews	Assistant: ~7 years before major review; Associate: ~4 years before next review; Professor: indefinite with ongoing reviews

Review Schedule	Year 1: Confirming Year 3 (or 2 in A&S): Developmental Year 5: Critical Year 7: Major Review then every 4 years (or 5 in the A&S)	Year 1: Confirming Year 3: Developmental Year 5: Critical by Year 8: Major Review (Assistant → Associate); then every 5 years
Promotion Outcome	Can pass major review but not be promoted (depends on school)	Must pass major review → mandatory promotion; failure at the major review = nonrenewal
Post- Major Review	SLiDs reviewed every 4 years; remain at rank indefinitely	Associates reviewed every 5 years; can be considered for Full but not required
Appointment Terms	Non-tenure-track appointment with stated term; renewable based on reviews	Non-tenure-track appointment with stated term; failure to pass any review triggers letter of nonrenewal with notice as specified in faculty handbook

Path for Existing Faculty	N/A (current structure)	Current LiDs → Assistant PoI Current SLiDs → Associate or Full PoI (based on experience & metrics)
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Exceptional Honor	Teaching Professor (capped at 5% of faculty; formal nomination required)	Teaching Professor with Distinction (capped at 5% of faculty; formal nomination required)
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University Senate

Proposed: May 8, 2026

Adopted: May 8, 2026

58-0-1: In favor-opposed-abstained

RESOLUTION ON INSTITUTIONAL ACCOUNTABILITY AND GOVERNANCE FOLLOWING THE HADDEN REPORT

WHEREAS, in October 2023, the University Senate unanimously adopted a resolution calling for an independent investigation into the institutional failures revealed by the case of Robert Hadden, including a full accounting of how such failures occurred and how they would be prevented in the future; and

WHEREAS, the University Senate's resolution reflected grave concern not only about the harms experienced by patients, but also about the profound breakdowns in oversight and accountability that allowed those harms to persist over decades; and

WHEREAS, the University has now released the Hadden report, representing an important step toward transparency and acknowledgment of institutional responsibility; and

WHEREAS, the report documents serious failures in systems, reporting structures, and institutional culture, while also leaving important questions regarding institutional decision-making and accountability unresolved; and

WHEREAS, the institution continues to face inconsistencies in accountability when confronted with indiscretions by leadership and senior faculty members; and

WHEREAS, the findings of the Hadden report and recent disclosures regarding institutional affiliations (e.g., documented relationships with Jeffrey Epstein) underscore the need for and importance of clear, consistent, and transparent systems of accountability across all domains of University activity.

THEREFORE, BE IT RESOLVED that the University Senate:

1. Acknowledges the release of the Hadden report and the courage of survivors whose persistence made this investigation possible. Nevertheless, also recognizes that the report fell significantly short in addressing accountability and responding to questions from the community;

2. Requests that the University administration and Board of Trustees provide to the University Senate:

- the **role, scope, and membership of trustee committees involved in overseeing the investigation**, and
- a clear explanation of **how the independence of the investigative process was defined and ensured**;
- a transparent accounting to the community of the institutional decisions and circumstances that contributed to the financial outcomes of the Hadden case, including the factors that led to more than **\$1.2 billion in settlements**;

3. Calls on the University to strengthen and clearly communicate protections for individuals who report misconduct, including mechanisms that ensure that concerns raised by patients, staff, students, and faculty can be reported without fear of retaliation and are acted upon in a timely and accountable manner;

4. Requests that the University address leadership failings and ensure accountability in cases where actions, affiliations, or relationships raise serious ethical concerns, including those related to the Jeffrey Epstein case, through fair, consistent institutional policies;

5. Establishes a formal mechanism for ongoing consultation between the University administration and University Senate governance bodies on matters involving gender-based harm (e.g., sexual assault and sexual harassment), ethical risk, and institutional accountability. For example, to create clear and consistent institutional policies and processes for evaluating ethical concerns involving affiliates, donors, and individuals associated with the University, including publicly articulated standards and procedures for review and response; and

6. Requests that the University report back to the University Senate no later than June 30, 2026, on steps taken to address the questions posed in the letter presented at University Senate Plenary on April 10, 2026, regarding issues identified in the Hadden report and to implement reforms consistent with this resolution.

Proponents:

Commission on the Status of Women

External Relations and Research Policy

Committee

Commission on Diversity

Faculty Affairs, Academic Freedom and Tenure

Committee

Research Officers Committee

Student Affairs Committee

**RESOLUTION TO REVISE STANDARDS FOR NON-DEGREE PROGRAMS BY
REVISING MINIMUM CREDIT REQUIREMENTS FOR CERTIFICATES AND APPROVING NO
NEW CERTIFICATIONS OF PROFESSIONAL ACHIEVEMENT**

WHEREAS the University Senate, through its Education Committee, is authorized under the University Statutes to set standards and procedures for the awarding of statutory certificates; and

WHEREAS the University Senate, through its Education Committee, has also been responsible for setting standards and procedures for the awarding of certifications of professional achievement, previously known as statements of attendance; and

WHEREAS the standards for the awarding of statutory certificates were last reviewed by the University Senate in November 1995 and were established at a minimum of 24 points of course work for those certificates that were standalone, that is, were not issued to those simultaneously completing a graduate degree at Columbia; and

WHEREAS this review of standards in November 1995 also established a minimum 12 points of coursework for certifications of professional achievement, and

WHEREAS having undertaken in the 2025-26 Academic Year a review of certificates offered by Columbia University and by peer institutions, the University has noted a reduction in the minimum points of course work; and

WHEREAS the University seeks to maintain the relevance and attractiveness of certificates and to broaden the benefits of a Columbia education and has proposed, therefore, a reduction in the minimum points of coursework required from 24; and

WHEREAS the University Senate Education Committee has favorably reviewed this proposal and has advised that the standard now be set at a minimum of 15 points of coursework;

THEREFORE BE IT RESOLVED that the University Senate approve this revision in the standard for certificates to a minimum of 15 points of coursework for standalone certificates; and

BE IT FURTHER RESOLVED that, in the interests of aligning standards for credentials, no new certifications of professional achievement be approved.

Proponent: Education Committee

FAQs for University Senate on Certificates and CPAs (Certifications of Professional Achievement)

May 2026

Prepared by the Office of Vice Provost for Academic Programs

1. What is the Resolution on Certificates and CPAs (Certifications of Professional Achievement) about?

The Senate Education Committee has approved a request from the Provost Office to revise Columbia's credit hour requirement for state-registered certificates. At present, Columbia requires a minimum of 24 credits for stand-alone certificates and 20 credits for certificates embedded in degree programs. New York State Education Department (NYSED) approves all certificates, and therefore, students in these programs are generally eligible for federal financial aid. But there is no minimum credit requirement on the part of NYSED; the thresholds are unique to Columbia. The requested new minimum will be 15 credits for both stand-alone certificates and certificates embedded in degree programs. The committee voted and approved the reduction during its November 2025 meeting.

In parallel, the committee has been considering whether CPAs (Certifications of Professional Achievement) should continue to be an option for schools/departments, in light of concerns about its educational quality. Currently, a CPA is a stand-alone curriculum of a minimum of four credit-bearing courses, totaling at least 12 credits and taken for letter grades. CPA is not approved by NYSED, and therefore, students in these programs are generally not eligible for federal financial aid. During its February 2026 meeting, the committee voted to place a moratorium on approving proposals on new CPAs.

These two issues are intrinsically connected, for at least two reasons. Given the 24-credit requirement for free-standing certificates, CPAs serve as a lower-cost alternative; if at a minimum of 15 credits, certificates can become a more robust and state-approved credential to replace the need for CPAs.

2. What is the rationale for moving from 24 credits to 15 credits for Certificates?

Our threshold sits very close to the NYSED-required 30-credit minimum for a master's degree, and students can reasonably question why they would commit to a certificate when a graduate degree requires just six additional credits. Reducing the requirement to a 15-credit minimum would bring Columbia into alignment with our peers, lower barriers to access, and allow schools to create certificates that reach a broader community of learners.

3. Are there differences between certificate programs offered by Graduate Schools of Arts and Sciences (Humanities, Natural Sciences, Social Sciences) and certificate programs offered in professional schools or offered in Medical and Law Schools?

No. Certificates are state-registered programs that show a student has completed training and gained specific skills in a certain field. While the content differs between GSAS and professional schools, the approval process and credit requirements are the same.

4. Do certificate programs in various peer institutions require the same number of credits?

No. Among our peer institutions, as shown below, some offer credit-bearing certificates while others use certificates for non-credit professional education.

Institution	Credits	Links	Notes
Harvard	12-18	Graduate Certificates	
Princeton	9-15	Certificates	
Yale	15-18	Graduate Non Degree	
UPenn	12	Stand-Alone Certificates	
Cornell		Exec Ed - Online Cert https://ecornell.cornell.edu/certificates/online/	Most certificates offered for Professional Development Units as opposed to credits
Brown		Embedded in Undergrad Curricula	Most certificates are 3-5 courses.
Stanford	12	Doerr School of Sustainability Certificates	
NYU	12	A&S Advanced Certificates	
MIT		Professional Education	Non-credit
UChicago		Embedded in Graduate Degrees Non-Credit Certificates	4-5 courses for certificates embedded in graduate degrees

5. How many students are currently enrolled in certificate programs and CPAs at Columbia?

Annual enrollment below is based on the average number of students for whom the program was part of their academic record across fall terms 2023, 2024, and 2025. Please see a full list with program names and enrollments in the Appendix.

	Number of programs	Number of students
Free-standing certificate	12 with enrollment (GS 1, SPS 4, GSAPP 1, Journalism 1, Dental 4, VP&S 1) 3 with no enrollment	434 (largest: GS Post-Bac of 49 credits with 249 students)
Embedded certificate	32 with enrollment (GSAS 5, Law 1, Nursing 1, Public Health 25) 28 with no enrollment	510 (largest: GSAS Comparative Literature & Society of 24 credits with 94 students)
CPA	26 with enrollment (CBS 1, SEAS 7, SPS 11, Nursing 1, Public Health 1, VP&S 5) 27 without enrollment	237 (largest: SPS Narrative Medicine of 12 credits with 105 students)

6. Would the revised credit requirement apply to existing certificate programs or to new certificate programs only?

The revised minimum 15-credit requirement will apply to new certificate programs. Existing certificate programs have the option to make changes if so desired.

7. If applicable to existing certificate programs, how would these programs address the change in credits?

All certificate programs that decide to reduce their required credits will need to submit a substantive change proposal to the Office of the Vice Provost for Academic Programs (OVPAP). Programs making such changes must present a coherent rationale and justification.

8. Would those individual certificate programs that would see a reduction in credit hours be resubmitted to the Education Committee for the review and approval of the committee and University Senate?

Substantive changes to programs are not reviewed by the Senate Education Committee.

9. Would these require review or re-review by NYSED?

New certificates will need to be approved by NYSED, and existing certificates that propose a reduction in credits will also be reviewed by NYSED.

10. Would the contents of a free-standing certificate program be adjusted based on the reduced number of credits?

If an existing certificate program chooses to reduce the number of credits, it can do so by decreasing the number of courses and/or reducing the credits of courses. The revised minimum 15-credit requirement, however, does not automatically lead to this change for existing certificates. These programs have the option to change if so desired.

11. How do we explain the reduced number of required credits to recent graduates who have just earned a Certificate based on the currently required credits?

This will be applicable to existing certificate programs that choose to make the change. Reduction in credit requirements takes place from time to time in various types of programs, including some doctoral and master's degrees recently reviewed by OVPAP and NYSED. Proposals for such changes must include a coherent rationale and justification.

12. Can an embedded certificate automatically become free-standing after the credit reduction from 20 to 15?

An embedded certificate necessarily builds on a set of required courses in a hosting degree program; the scaffolding would be removed if the embedded certificate were to become free-standing. To become free-standing, the certificate curriculum will need to undergo substantive change, and this will entail reviews by OVPAP and NYSED.

13. What will happen to current CPAs once a moratorium is imposed on the review of proposals for new CPAs?

OVPAP has reached out to the three schools with the largest number of CPAs, to discuss options. If a school is interested in adding course(s) to a current CPA so as to transform it to a free-standing certificate, OVPAP will review their proposal and submit to NYSED for approval. Otherwise, existing CPAs will be permitted to continue as is.

List of Certificate Programs and CPAs in Columbia's Student Information System (SIS) as of 01.23.2026

Notes:

¹ Certificate programs include undergraduate certificates and advanced certificates (postbaccalaureate), both of which are approved by NYS. Certifications of Professional Achievement (CPAs) do not go through the NYS approval process and until recently were not required to go through the

² Programs are differentiated by whether they are "Free-standing" (i.e. are offered independently of another degree program) or "Embedded," offered as part of another approved degree program (e.g. MPH)

³ Field definitions:

"Avg Enrl" is the mean number of students for whom the program was part of their academic record across fall terms 2023, 2024, 2025.

"Credits" is the number of points required to be awarded the credential. The source is APAS for those programs with an APAS ID. Dental (except Orthodontics) & Psychoanalysis are measured in hours.

⁴ The list is sorted by program character, degree type, (campus), school and SIS Program Name. Programs shown with enrollments are listed first; Certifications of Professional Achievement (CPAs) are list separately below.

Postbaccalaureate and Advanced Certificates

Program Character	Degree Type	School	SIS Program Name	Avg Enrl
With Enrollments				
Free-standing	Postbac Certificate	General Studies	PREMEDICAL SCIENCES	249
Free-standing	Postbac Certificate	Professional Studies	Classics	11
Free-standing	Postbac Certificate	Professional Studies	Ecology, Evolution & Environmental Biology	7
Free-standing	Postbac Certificate	Professional Studies	Psychology	36
Free-standing	Postbac Certificate	Professional Studies	Quantitative Studies for Finance	4
Free-standing	Advanced Certificate	GSAPP	THE SHAPE OF TWO CITIES: NEW YORK AND PARIS	13
Free-standing	Advanced Certificate	Journalism	ECONOMICS AND BUSINESS JOURNALISM	10
Free-standing	Advanced Certificate	Dental	Advanced Education in General Dentistry 2	22
Free-standing	Advanced Certificate	Dental	Advanced Education in General Dentistry 3	8
Free-standing	Advanced Certificate	Dental	Endodontics	12
Free-standing	Advanced Certificate	Dental	Periodontics	16
Free-standing	Advanced Certificate	VP&S-Psychoanalysis	PSYCHOANALYSIS	46
Number of Programs		12	Sum of Average Enrollments	434

No Enrollments

Free-standing	Advanced Certificate	Dental	Orthodontics	0
Free-standing	Advanced Certificate	Dental	Prosthodontics	0
Free-standing	Advanced Certificate	VP&S-Psychoanalysis	PSYCHOANALYSIS ONLINE PROGRAM	0
Number of Programs		3	Sum of Average Enrollments	0

With Enrollments

Embedded	Advanced Certificate	GSAS	COMPARATIVE LITERATURE & SOCIETY	94
Embedded	Advanced Certificate	GSAS	COMPARATIVE MEDIA	4
Embedded	Advanced Certificate	GSAS	MEDIEVAL AND RENAISSANCE STUDIES	1
Embedded	Advanced Certificate	GSAS	PSYCHOANALYTIC STUDIES	5
Embedded	Advanced Certificate	GSAS	THE HARRIMAN INSTITUTE (<i>Russian Studies</i>)	1
Embedded	Advanced Certificate	Law	GLOBAL BUSINESS LAW AND GOVERNANCE	7
Embedded	Advanced Certificate	Nursing	FAMILY NURSE PRACTITIONER	2
Embedded	Advanced Certificate	Public Health	ADVANCED EPIDEMIOLOGY	11
Embedded	Advanced Certificate	Public Health	APPLIED BIOSTATISTICS AND PUBLIC HEALTH DATA SCIEN	40
Embedded	Advanced Certificate	Public Health	CHILD, YOUTH AND FAMILY HEALTH	10
Embedded	Advanced Certificate	Public Health	CLIMATE AND HEALTH	8
Embedded	Advanced Certificate	Public Health	COMPARATIVE EFFECTIVENESS & OUTCOMES RESEARCH	41
Embedded	Advanced Certificate	Public Health	ENVIRONMENTAL HEALTH POLICY	5
Embedded	Advanced Certificate	Public Health	EPIDEMIOLOGY OF CHRONIC DISEASE	21
Embedded	Advanced Certificate	Public Health	EPIDEMIOLOGY OF POPULATION MENTAL HEALTH	13
Embedded	Advanced Certificate	Public Health	FOOD SYSTEMS AND PUBLIC HEALTH	6
Embedded	Advanced Certificate	Public Health	GLOBAL HEALTH	13
Embedded	Advanced Certificate	Public Health	HEALTH AND HUMAN RIGHTS	12
Embedded	Advanced Certificate	Public Health	HEALTH COMMUNICATION	16
Embedded	Advanced Certificate	Public Health	HEALTH OF AN AGING SOCIETY	10
Embedded	Advanced Certificate	Public Health	HEALTH POLICY ANALYSIS	31
Embedded	Advanced Certificate	Public Health	HEALTH POLICY AND PRACTICE	26
Embedded	Advanced Certificate	Public Health	HEALTH PROMOTION RESEARCH & PRACTICE	12
Embedded	Advanced Certificate	Public Health	HISTORY, ETHICS AND LAW	5
Embedded	Advanced Certificate	Public Health	INFECTIOUS DISEASE EPIDEMIOLOGY	31
Embedded	Advanced Certificate	Public Health	INJURY AND VIOLENCE PREVENTION	3
Embedded	Advanced Certificate	Public Health	MOLECULAR EPIDEMIOLOGY	8
Embedded	Advanced Certificate	Public Health	PUBLIC HEALTH & HUMANITARIAN ACTION	11
Embedded	Advanced Certificate	Public Health	PUBLIC HEALTH RESEARCH METHODS	19
Embedded	Advanced Certificate	Public Health	SEXUALITY, SEXUAL & REPRODUCTIVE HEALTH	23
Embedded	Advanced Certificate	Public Health	SOCIAL DETERMINANTS OF HEALTH	15

Embedded	Advanced Certificate	Public Health	TOXICOLOGY	6
Number of Programs		32	Sum of Average Enrollments	510
No Enrollments				
Embedded	Advanced Certificate	Climate	Certificate in Climate and Disaster Management	0
Embedded	Advanced Certificate	Climate	Certificate in Climate and Food Systems	0
Embedded	Advanced Certificate	Climate	Certificate in Climate Systems and Analytics	0
Embedded	Advanced Certificate	GSAPP	Conservation of Historic Buildings and Archaeological Sites	0
Embedded	Advanced Certificate	GSAS	Human Rights	0
Embedded	Advanced Certificate	GSAS	THE INSTITUTE OF LATIN AMERICAN STUDIES	0
Embedded	Advanced Certificate	GSAS	THE MIDDLE EAST INSTITUTE	0
Embedded	Advanced Certificate	GSAS	THE SOUTHERN ASIAN INSTITUTE	0
Embedded	Advanced Certificate	GSAS	THE BLINKEN EUROPEAN INSTITUTE	0
Embedded	Advanced Certificate	GSAS	THE HARRIMAN INSTITUTE EAST CENTRAL EUROPE	0
Embedded	Advanced Certificate	GSAS	THE INSTITUTE OF AFRICAN STUDIES	0
Embedded	Advanced Certificate	GSAS	THE WEATHERHEAD EAST ASIAN INSTITUTE	0
Embedded	Advanced Certificate	Journalism	PSYCHOANALYTIC STUDIES	0
Embedded	Advanced Certificate	Law	INTERNATIONAL CRIMINAL LAW	0
Embedded	Advanced Certificate	Law	THE HARRIMAN INSTITUTE (Dual CER/JD)	0
Embedded	Advanced Certificate	SIPA	PUBLIC POLICY CONSORTIUM	0
Embedded	Advanced Certificate	Dental	DENTAL PUBLIC HEALTH	0
Embedded	Advanced Certificate	Dental	POST-DOCTORAL CERTIFICATE EXTENDED	0
Embedded	Advanced Certificate	Nursing	ADULT-GERONTOLOGY ACUTE CARE NURSE PRACTITIONER	0
Embedded	Advanced Certificate	Nursing	ADULT-GERONTOLOGY PRIMARY CARE NURSE PRACTITIONER	0
Embedded	Advanced Certificate	Nursing	ADVANCED CERTIFICATE IN ACUTE PEDIATRIC CARE	0
Embedded	Advanced Certificate	Nursing	ANESTHESIA	0
Embedded	Advanced Certificate	Nursing	NURSE MIDWIFERY	0
Embedded	Advanced Certificate	Nursing	PEDIATRIC PRIMARY NURSE PRACTITIONER	0
Embedded	Advanced Certificate	Nursing	PSYCHIATRIC-MENTAL HEALTH NURSE PRACTITIONER	0
Embedded	Advanced Certificate	Public Health	DEMOGRAPHY	0
Embedded	Advanced Certificate	Public Health	HEALTH MANAGEMENT	0
Embedded	Advanced Certificate	Public Health	PUBLIC HEALTH INFORMATICS	0
Number of Programs		28	Sum of Average Enrollments	0
Certifications of Professional Achievement (CPAs)				
Program Character	Degree Type	School	Program Name	Avg Enrl
With Enrollments				
Free-standing	CPA	Business	Business Research CPF	10
Free-standing	CPA	Engineering	Applied Mathematics	1
Free-standing	CPA	Engineering	Data Sciences CPF	3
Free-standing	CPA	Engineering	Data Sciences CPF Online	2
Free-standing	CPA	Engineering	Financial Engineering	2
Free-standing	CPA	Engineering	Information Systems	1
Free-standing	CPA	Engineering	Medical Physics	2
Free-standing	CPA	Engineering	Operations Research	1
Free-standing	CPA	Professional Studies	Bioethics	2
Free-standing	CPA	Professional Studies	Bioethics -- Online	5
Free-standing	CPA	Professional Studies	Critical Issues in International Relations	1
Free-standing	CPA	Professional Studies	Enterprise Risk Management	3
Free-standing	CPA	Professional Studies	Enterprise Risk Management -- Online	2
Free-standing	CPA	Professional Studies	Human Rights	1
Free-standing	CPA	Professional Studies	Narrative Medicine -- Online	105
Free-standing	CPA	Professional Studies	Sustainability Analytics	6
Free-standing	CPA	Professional Studies	Sustainable Finance	10
Free-standing	CPA	Professional Studies	Sustainable Finance -- Online	3
Free-standing	CPA	Professional Studies	Sustainable Water Management	1
Free-standing	CPA	Nursing	PALLIATIVE CARE THROUGHOUT THE LIFESPAN (FOR APRN	12
Free-standing	CPA	Public Health	Clinical & Translational Research CPF	1
Free-standing	CPA	VP&S-Medicine	DBMI HIT CERTIFICATION PROGRAM	5
Free-standing	CPA	VP&S-Psychoanalysis	Adult Psychodynamic Psychotherapy (APP)	23
Free-standing	CPA	VP&S-Psychoanalysis	Child and Adolescent Psychodynamic Psychotherapy (CAPP)	8
Free-standing	CPA	VP&S-Psychoanalysis	Parent-Infant Psychotherapy (PIP)	7
Free-standing	CPA	VP&S-Psychoanalysis	Transference-Focused Psychotherapy (TFP)	20
Number of Programs		26	Sum of Average Enrollments	237
No Enrollments				
Free-standing	CPA	Engineering	Business & Technology	0
Free-standing	CPA	Engineering	Chemical Engineering Electrochemical Energy	0
Free-standing	CPA	Engineering	Chemical Engr Biotechnical and Pharmaceuticals	0
Free-standing	CPA	Engineering	Civil Engineering	0

Free-standing	CPA	Engineering	Construction Management	0
Free-standing	CPA	Engineering	Earth and Environmental Engineering	0
Free-standing	CPA	Engineering	Industrial Engineering	0
Free-standing	CPA	Engineering	Intelligent Systems	0
Free-standing	CPA	Engineering	Low Carbon Efficiency Technology	0
Free-standing	CPA	Engineering	Manufacturing Engineering	0
Free-standing	CPA	Engineering	Materials Science	0
Free-standing	CPA	Engineering	Nanotechnology	0
Free-standing	CPA	Engineering	Networking and Systems	0
Free-standing	CPA	Engineering	Sustainable Energy	0
Free-standing	CPA	Engineering	Systems Engineering	0
Free-standing	CPA	Engineering	Telecommunications	0
Free-standing	CPA	Engineering	Wireless and Mobile Communications	0
Free-standing	CPA	GSAPP	Applied Building Science CPF	0
Free-standing	CPA	Journalism	CPF IN COMPUTATIONAL COMPETENCY	0
Free-standing	CPA	Professional Studies	United Nations Studies	0
Free-standing	CPA	SIPA	CPF IN COMPUTATIONAL COMPETENCY	0
Free-standing	CPA	Dental	IMPLANTOLOGY CPF -- 1 DAY X WEEK	0
Free-standing	CPA	Dental	IMPLANTOLOGY CPF -- 2 DAYS X WEEK	0
Free-standing	CPA	Dental	IMPLANTOLOGY CPF -- INTERNATIONAL	0
Free-standing	CPA	Nursing	CERT IN TRANSGENDER AND NON BINARY HEALTHCARE FC	0
Free-standing	CPA	Public Health	ADVANCED CERTIFICATE IN FOOD SYSTEMS AND PUBLIC H	0
Free-standing	CPA	VP&S-Human Nutrition	MEDICAL NUTRITION SCIENCE CPF	0
Number of Programs		27	Sum of Average Enrollments	0

Data source: SIS

Prepared by: OVPAP (led)

Proposed: May 8, 2026

Adopted: May 8, 2026

51-0-5: In favor-opposed-abstained

University Senate

**RESOLUTION TO AMEND THE UNIVERSITY SENATE ELECTIONS CODE
TO CREATE SECTION 2.e. (iii)**

BE IT RESOLVED that the University Senate approve the update to the University Senate Elections Code, as set out, below.

SEC.2: PROVISIONS RELATING TO ALL ELECTIONS

e. Elections Practices

(iii) Candidates and their supporters may engage in electioneering activities at any time during the election process, including during the voting period, except as otherwise limited by this Code or by rules duly adopted by the Elections Commission.

Proponent:

Senate Structure and Operations Committee

	Columbia University Senate Elections Code	Reviewed: December 4, 2020
		Adopted: December 11, 2020
		Effective: December 11, 2020

University Senate Elections Code

1. **ESTABLISHMENT.**

- a. Elections Code. This code shall be known as the Elections Code.
- b. Elections Commission. The University Senate hereby creates an Elections Commission whose primary duty shall be to supervise the conduct of elections to the Senate and all other elective bodies whose power derives from the Senate, and all elections authorized under the Statutes of the University and the By-Laws of the University Senate, except for the election of members of the Elections Commission. The Senate, in plenary session, shall choose the members of the Elections Commission, nominations being made initially by the Executive Committee.
- c. Membership. The Elections Commission shall consist of five members who may or may not be members of the University Senate and who shall be elected as follows: one tenured faculty member, one non-tenured faculty member, one student, one administration member, and one member from among the administrative, library and research staffs. The terms of the tenured faculty member, the non-tenured faculty member and the student shall begin at the first plenary session of the Senate in academic years that begin in even-numbered years, and run to the first plenary session of the academic year two years thence. The terms of the other members shall begin at the first plenary session of the Senate in academic years that begin in odd-numbered years, and run to the first plenary session of the academic year two years thence. The Elections Commission shall elect a chair at its first meeting following the first plenary session of the Senate in an academic year that begins in an even-numbered year. The Chair shall serve a two-year term as chair and until a successor has been chosen by the Elections Commission. The tradition of the Senate has been that the student member be a student at the Law School and that that student be chosen to chair the Elections Commission. In the event of a vacancy in the office of chair, the Elections Commission, at one of its next two meetings, shall select a replacement to complete the term. In the event of a member vacancy, the Senate, at one of its next two plenary sessions, shall select a replacement to complete the term.

- d. Purpose and Scope. The purpose of this Elections Code is to provide a comprehensive set of rules and regulations to all parties concerning the conduct of University Senate elections. For such elections, these rules and regulations take precedence over any rules, regulations, policies, or practices adopted or followed by the various Divisional Elections Commissions established under this Code.
- e. Operations. The Elections Commission shall follow the By-Laws of the University Senate regarding the operations of committees.
- f. Additional Rules. The Elections Commission may make such further rules, consistent with this Elections Code, as it deems necessary and appropriate for the conduct of elections, and shall report such further rules to the University Senate, which may overrule or amend them.
- g. Guidance from Previous Elections Commission Rulings. The Elections Commission shall maintain and make available a record of its rulings as guidance for future matters.

2. PROVISIONS RELATING TO ALL ELECTIONS.

- a. Definitions. The word “constituency” is used with the same sense as in Section 1(c) of the By-Laws of the University Senate. The words “electoral caucus” are used with the same sense as in Section 3 of the By-Laws of the University Senate.
- b. Election Dates. The Elections Commission shall declare the dates of all University Senate elections, except as specified in the By-Laws of the University Senate and in this Elections Code. The Elections Commission may from time to time delegate such responsibilities to the Divisional Elections Commissions or the Senate staff, as appropriate.
- c. Divisional Elections Commissions.
 - i. The Elections Commission may request the assistance of a Divisional Elections Commission for any constituency or electoral caucus. The Elections Commission shall work with the appropriate administrative officers, including the deans of the faculties and presidents of the affiliated institutions, to establish such commissions, giving due regard to the advice of such divisional representative bodies as exist. Such Divisional Elections Commissions may be appointed or elected. In case a Divisional Elections Commission does not exist at the time of an election, the Elections Commission may make whatever ad hoc arrangements it deems necessary.
 - ii. Insofar as University Senate elections are concerned, all Divisional Elections

Commissions must abide by rules and regulations laid down by the Elections Commission. If a Divisional Elections Commission would like to adopt rules, regulations, or practices in addition to the Senate's, they must be submitted to the Elections Commission for approval the semester before each election. In no case can Divisional Elections Commissions adopt rules, regulations or practices affecting eligibility to vote or stand in an election.

- iii. Divisional Elections Commissions shall adopt procedures for candidates to petition the Divisional Elections Commission for redress of any alleged infraction of this Elections Code and shall notify candidates of such procedures in accordance with this Code.
- d. Notice. Every candidate shall be informed that a copy of this Elections Code and of the Statutes, By-Laws, and Rules of the Columbia University Senate are available on the [Senate website](#).
- e. Election Practices. Each Divisional Elections Commission shall observe the following practices in dealing with nominations:
 - i. All candidates shall be permitted to publicize their own candidacies and all persons may seek support for themselves or for others. Each Divisional Elections Commission shall, however, issue stringent limits on campaign expenditures so that no prospective candidate shall suffer a financial handicap. Each Divisional Elections Commission shall make available, to the extent possible, a common form of publicity (e.g., bulletinboard) enabling all candidates to announce their candidacies free of charge.
 - ii. Every candidate is accountable not only for violations of campaign rules and regulations that they might commit, but also for any such violations committed by people that the candidate has allowed to work on their campaign.
- f. Electronic Communications.
 - i. All candidates shall be permitted to publicize their own candidacies and all persons may seek support for themselves or for others through means of electronic communications, on University systems, or on third party systems over the internet, except as restricted or prohibited under this Elections Code.
 - ii. The following are prohibited with regard to electronic communications conveying electioneering statements: vulgar, obscene, or abusive language or images; unsupported accusations, defamation, or threats of any kind; offensive terms targeted at persons or groups of persons in a way intended to be disparaging; advertisements or language

focused primarily on promoting commercial interests or services; spam, or communications containing subject matter wholly unrelated to elections.

- iii. In governing the use of electronic communications for campaigning, the Elections Commission or the Divisional Elections Commissions may restrict or prohibit the use of electronic communications on third party systems for campaigning and publicity statements, as reasonably appropriate.
- g. Balloting Practices. Each Divisional Elections Commission shall observe the following practices in dealing with balloting:
 - i. Unless otherwise specific in this Elections Code, all voting shall be secret, either (1) in designated polling places, or (2) by written ballot in one or more meetings, or (3) by mail ballot using the double envelope system, or (4) by electronic ballot. Should the Divisional Elections Commission decide to conduct voting by electronic means, the system used shall provide for password-protected voting or other means reasonably calculated to ensure that all voting is carried out by the proper constituents of the relevant constituency and that each voter may cast only the proper number of votes. In all cases, a reasonable time (preferably at least seven days) shall be allowed for balloting.
 - ii. On the ballots and in all statements and announcements related to elections, the Elections Commission and Divisional Elections Commissions shall supply only the following kinds of information about candidates: name, department, and position. The Elections Commission and Divisional Elections Commissions shall in no way distinguish incumbent candidates or any preferred list from any other candidate on ballots and all election-related statements. These restrictions do not apply to the statements of the candidates themselves, including written candidates' statements that may accompany the ballot, which shall be consistent with this Elections Code.
 - iii. Election may require a majority vote or plurality, according to previously established practice or decision of the Elections Commission or Divisional Elections Commission, provided that in no case may a plurality of less than a third be deemed to warrant election, using as a basis of calculation the total number of voters voting in an election; and if a plurality of a third thus calculated is not attained, there shall be a run-off election for those seats which are unfilled.
 - iv. In place of the balloting method described in the previous paragraph, a constituency may substitute a system of preferential balloting, in which voters rank several candidates in order by preference. In preferential balloting, the one-third plurality requirement set forth in the previous paragraph is waived.

- v. In case a run-off election is needed, the Elections Commission or Divisional Elections Commission shall fix a date and shall declare eligible the highest-ranking candidates from the first election willing to continue to stand, up to twice the number of vacancies still to be filled, with the following exception: if two or more candidates in the first election tie for the last runner-up position eligible for the run-off (e.g., second place in a one-seat election), each can take part in the run-off, even though there will then be more than twice as many candidates as seats. In a run-off election the highest-ranking candidate(s) shall be elected. The run-off election must meet the same plurality requirements as other elections.
- vi. Each candidate may have a poll-watcher present at polling places and at the counting of ballots for his or her constituency. Ballots shall be counted by the Divisional Elections Commission and reported immediately to the Elections Commission.
- h. Due Process. When the Elections Commission receives a complaint filed with it in connection with any University Senate election, it shall proceed as follows:
 - i. Distribute promptly a copy of the complaint to each candidate in that election, the Divisional Elections Commission, and any other person with a bona fide interest in the matter;
 - ii. Give any candidate who may be materially affected by the decision an opportunity to be heard before rendering the decision;
 - iii. Put any decision in response to such a complaint in writing, with copies given to each candidate in that election, the Divisional Elections Commission, and any person with a bona fide interest in the matter; and
 - iv. Dismiss the complaint on written notice to the complainant without complying with other aspects of this rule, if the Commission determines that a complaint is plainly baseless.
- i. Appeals before Ballots have been counted. If, between the declaration of a vacancy and the counting of ballots, a member of a constituency, whether or not a candidate, feels aggrieved by the rules or practices of a Divisional Elections Commission, they may appeal to the Elections Commission for adjudication, which shall act and redress, where appropriate as expeditiously as possible.
- j. Contested Elections after Ballots have been counted. Once the ballots have been counted, any challenge to the credentials of a successful candidate on the grounds of substantial

error in procedure shall be heard by the Elections Commission, which shall report its recommendations to the University Senate. The decision of the Elections Commission shall be final unless overturned by the Senate. For elections to the Senate, any person whose victory has been certified shall have a vote in the Senate, unless and until the Senate refuses to accept their credentials, on all matters except a vote on their own credentials.

- k. Authority of the Chair in Time-Sensitive Matters. In the event that a time-sensitive matter comes before the Elections Commission and it would not be practicable to timely convene the full membership of the Commission, the Chair of the Commission shall have the authority to decide the matter on behalf of the Commission. If the Chair makes such a decision, the Chair shall promptly inform the membership of the Commission, which may deliberate and vote to modify the decision of the Chair. Additionally, the Commission may reconsider the decision of the Chair in a time-sensitive matter so long as the matter has not become moot before the appeal can be heard.

3. **ELECTION OF UNIVERSITY SENATE MEMBERS.** Elections for members of the Senate shall be held in accordance with the Statutes of the University and the By-Laws of the University Senate.

- a. Definitions. The word “category” is used with same sense as in Chapter II of the Statutes of the University. The word “faculty” is used with the same sense as in Section 30 of the Statutes of the University.
- b. Apportionment. The Elections Commission shall advise the University Senate on the apportionment of seats as provided in Chapter II of the Statutes of the University and subject to the additional provisions in the By-Laws of the University Senate. The populations to be compared for this purpose shall be counted for officers of instruction as prescribed in Sections 20.b.1 and 20.b.2 of the Statutes, and for students as prescribed in Section 20.c of the Statutes.
- c. Constituency Membership. The Elections Commission shall determine, in case of dispute, into which constituency an elector falls. Any individual who believes he or she has been incorrectly omitted from a constituency or incorrectly assigned to a constituency shall inform the Divisional Elections Commission and, if the problem is not resolved, may appeal to the Elections Commission for adjudication, which shall act and redress, where appropriate, as expeditiously as possible.
- d. Election Notice. Whenever the election of one or more Senators is required, the Elections Commission shall issue an election notice. This election notice shall specify the membership of the Divisional Elections Commission that shall conduct the election and

the approximate date of the election subject to final determination by the Divisional Elections Commission. The election notice shall also delineate the members or affiliates of the University community who are eligible to vote in this election and who are eligible to be candidates in this election

- e. Election Practices. Each Divisional Elections Commission shall observe the following practices in dealing with nominations:
 - i. Notice of all information pertinent to an election (including relevant deadlines) must be provided at least seven calendar days before the nomination deadline to all eligible constituency members, using the method most likely to give actual notice to those members. Such notice may not include references to any potential candidates.
 - ii. During the nomination period, each member of a constituency has the right to make nominations up to the number of candidates to be elected. Self-nominations are allowed and can be made by submitting a signed statement of intent to run to the Divisional Elections Commission by the nomination deadline.
 - iii. The nomination of anyone who is not a member of the constituency on the day before the election commences shall be invalid.
 - iv. Notice shall be provided, using the method most likely to give actual notice, of the names of the candidates and the election process (including all deadlines and a description of the quorum requirement) to all members of the constituency eligible to vote. This information may be provided on the election ballot. This notice shall be given at least seven calendar days before the actual balloting period commences.
- f. Election Materials. Each Divisional Elections Commission shall submit its election materials to the Elections Commission no later than when the materials become available to the constituency. The Elections Commission may require any relevant materials to be submitted in the event of a dispute about an election.
- g. Electronic Communications. Each Divisional Elections Commission may adopt rules governing the use of such communications and electronic media, which shall be consistent with this Elections Code, and shall notify candidates of such regulations in a timely manner prior to commencement of elections.
- h. Vacancies. The Elections Commission shall declare a vacancy in the University Senate if a member dies, resigns, is recalled, or ceases to belong to the constituency from which they were elected, and shall direct that a by-election be held within a reasonable time. The

Elections Commission may from time to time delegate such responsibility to the Senate staff.

- i. Recall. A recall petition, as provided in Section 21.h of the Statutes, shall be submitted to the Elections Commission, which shall certify its validity, in consultation with the Divisional Elections Commission, and shall direct that a recall election be held as expeditiously as reasonable.

4. ELECTION OF UNIVERSITY SENATE OFFICERS BY THE SENATE, BY ELECTORAL CAUCUSES OF THE SENATE, OR BY SENATE COMMITTEES.

- a. Eligible Voters. The eligible voters for an office are the Senators, or appropriate subset of Senators, who are currently serving on the day preceding the start of the voting period for that office. For the election of the chair of a committee other than the executive committee, any individual who is not a Senator but is a member of the committee may also vote.
- b. Quorums. All University Senate bodies require a quorum, as defined in the By-Laws of the University Senate, to take any actions under this Elections Code. Whenever any Senate body does not have a quorum to take an action required under this Code, the action will be required at the next regularly scheduled meeting for which there is a quorum.
- c. Election of the Chair of the Executive Committee. Whenever there is an election for Chair of the Executive Committee, the Elections Commission shall determine the rules for this election and shall supervise this election. The [rules](#) shall be posted on the University Senate website no later seven days before the nomination period begins. The nomination period shall last at least seven days. The campaign period shall be no longer than seven days. The election period shall be at least seven days.
- d. Election of Other Elected Members of the Executive Committee. Each electoral caucus election process shall take place in a meeting of the respective caucus, and shall be by secret ballot. The election of members of the Executive Committee by electoral caucuses shall be conducted by Divisional Elections Commissions appointed by the Elections Commission. The Elections Commission shall appoint a Divisional Elections Commission for each electoral caucus only after consulting with the caucus, and considering its traditional mode of nominating or electing members of the Executive Committee.
- e. Election of Chairs of Committees other than the Executive Committee. Each committee as part of its first meeting after a reorganization of the University Senate shall elect its chair or co-chairs.

- f. Election of Members of Committees other than the Executive Committee. The University Senate, in its first plenary session of the academic year, shall elect the members of each of the other committees as a regular order of business. Senators shall be elected in odd-numbered years to two-year terms. In even-numbered years, continuing Senators who are a member of a committee continue to serve and are therefore not subject to election. Non-senators shall be elected to one-year terms. In the event of a member vacancy, the Senate, at one of its next two plenary sessions, shall elect a replacement to complete the term.
- g. Election Practices. The Elections Commission and each Divisional Elections Commission shall observe the following practices in dealing with nominations:
 - i. For the elections for the Chair and Members of the Executive Committee, the Elections Commission or Divisional Elections Commission must provide notice of all information pertinent to an election (including relevant deadlines). Notice shall be provided at least seven calendar days before the nomination deadline to all eligible members of any category and shall use the method most likely to give actual notice to those members. Such notice may not include references to any potential candidates.
 - ii. For the elections for the Members of the Executive Committee by the Electoral Caucuses, the Elections Commission or Divisional Elections Commission shall provide notice (as defined in paragraph i of this Subsection) of the names of the candidates and the election process (including all deadlines and a description of the quorum requirement) to all members of the constituency eligible to vote. The Elections Commission or Divisional Elections Commission shall allow a reasonable time (not less than three calendar days) to elapse before the actual balloting period commences.
- h. Additional Balloting Practices. The Elections Commission and each Divisional Elections Commission shall observe the following practices in dealing with balloting:
 - i. Voting does not need to be secret for the election of committee members (other than the Executive Committee) or for the election of chairs (other than the Chair of the Executive Committee).
 - ii. Voting shall be secret for the Chair of the Executive Committee or the Members of the Executive Committee.
 - iii. For elections to the Executive Committee by Electoral Caucuses, each voter shall be entitled to vote for as many candidates as there are senators to be elected. No Electoral Caucus may subdivide itself into subconstituencies for the purpose of these elections.

RESOLUTION TO RECOMMEND THE ADDITION OF LANGUAGE RELATED TO DISCIPLINARY REPORTING TRANSPARENCY TO THE RULES OF UNIVERSITY CONDUCT

WHEREAS the Committee on Rules of University Conduct serves to “review and recommend revision of rules of University conduct” as specified in the University Senate By-Laws; and

WHEREAS notations on transcripts and other records available to third-parties are an enduring and impactful potential outcome of a Rules of University Conduct disciplinary proceeding; and

WHEREAS the Columbia community has a right to transparency in the Rules of University Conduct; and

WHEREAS the current revision of the Rules of University Conduct does not provide transparency on reporting of disciplinary records associated with Rules of University Conduct proceedings;

THEREFORE BE IT RESOLVED that the University Senate recommends that the following language be added to Chapter XLIV, Section 449 (Rules of University Conduct, Sanctions and Other Remedies) of the Charters and Statutes of Columbia University in the City of New York:

“Notations will be placed on a respondent’s transcript if, and only if, they received a sanction resulting in separation from the University or if the respondent withdrew from the University with pending disciplinary action. Unless otherwise specified by the respondent, the University will respond to external third-party requests for a respondent’s disciplinary records (e.g., requests by graduate schools or employers) by disclosing only records of Rules of University Conduct violations that resulted in the following sanctions: disciplinary probation, suspension, expulsion, or revocation of degree. Matters that resulted in disciplinary probation may be reported for seven years from the date that the respondent was found responsible for a violation. Matters that resulted in a suspension, expulsion, or degree revocation from the University may be reported as a part of the respondent’s permanent education record. Matters where respondents maintained good disciplinary standing may not be reported unless otherwise specified by the respondent. This disclosure includes the respondent’s violation(s), the corresponding sanction(s), and the date of determination. A temporary or interim suspension will not appear on student transcripts or be reported to outside parties.”

Proponent: Committee on Rules of University Conduct

University Senate | Committee on Rules of University Conduct

Statement to University Senate Plenary: May 29, 2026

At the end of the May 8, 2026 Senate Plenary the Rules Committee presented a statement, after which there was discussion involving the Rules Administrator. In the aftermath of the discussion we sought to provide clarity to the public and asked the Rules Administrator to outline their practice over the past year by describing the conditions under which notations are placed on students' transcripts. We received the following response, which has also been published on the Office of Rules Administration's website:

"The following information is being provided to our community in response to questions regarding the University's policies on reporting of disciplinary outcomes.

Some information regarding disciplinary outcomes may appear on a transcript, while other information may appear in a Disciplinary Certification that a student has requested (for example, if a third party required Disciplinary Certification as part of an application process). Additionally, some professional associations (e.g., bar associations) require students to permit their schools to share information about discipline with the associations. The University's current reporting policy with respect to outcomes of Rules processes is as follows:

- If a sanction involves separation from the University, such as suspension or expulsion, this is permanently noted on the transcript and would be reported in a Disciplinary Certification.
- If a sanction involves disciplinary probation and thereby a loss of "good disciplinary standing," this would be reported through a Disciplinary Certification for seven years after the receipt of the sanction, but no notation would appear on the transcript.
- If a sanction involves conditional disciplinary probation (where a student remains in "good disciplinary standing"), no notation appears on the transcript, nor would this be reported as part of a Disciplinary Certification.
- If no sanction results as the outcome of a Rules process, no notation appears on the transcript, nor is anything related to the matter in question reported as part of a Disciplinary Certification. This also covers UJB decisions that do not involve sanctions, as well as other outcomes such as dismissal of complaints and informal resolutions. "

The Rules Committee requested clarification on if a temporary suspension imposed as an interim measure would qualify as "separation from the University" and thus appear on a transcript. We received the following response:

"While an interim suspension would technically involve a separation from the University, it is temporary and not a final outcome of a disciplinary proceeding and thus would not be reported to a third party or noted on a transcript. Nor would an interim suspension fall into the category of

"conditional disciplinary probation". CDP does not involve separation from the University and students remain in good disciplinary standing."

The Rules Committee agrees with the above methodology and believes that this process must be formalized in the Statutes so that members of the Columbia community have unambiguous expectations for the disciplinary processes associated with demonstration activity. This is a significant area of concern and we are comforted that the above practice has been consistent since the changes to the Statutes last summer. We aim to continue our work in order to recommend revisions to the Rules that are clear, fair, and rooted in the traditions of free expression and open debate.
