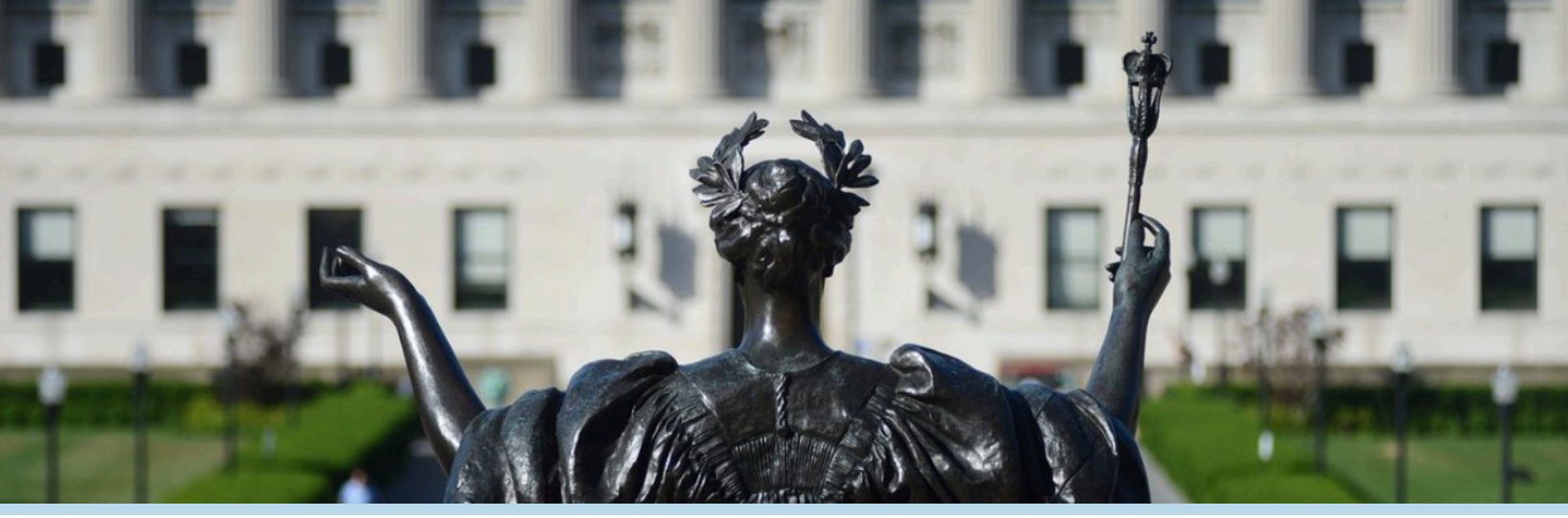


2026–2027 SESSION

University Senate Plenary

Friday, November 13, 2026

12:30 PM · MILLER THEATRE

COLUMBIA UNIVERSITY SENATE

University Senate

Proposed: November 13, 2026

Adopted: November 13, 2026

University Senate

Friday, November 13, 2026, at 12:30 p.m., Miller Theatre

Registration required

After registering you will receive a confirmation email with meeting details.

PROPOSED AGENDA

1. Adoption of the agenda
2. Adoption of the minutes of October 23, 2026
3. President's report and questions
4. Chair's report and questions
5. New business:
    a. Resolutions:
        i. Resolution to Approve an Academic Program Leading to the Advanced Certificate in Executive Leadership for Climate Disaster Management (Climate) (Education)
        ii. Resolution to Approve an Academic Program Leading to the Advanced Certificate in Climate and Energy Solutions (Embedded) (Climate) (Education)
    b. Committee reports and updates:
        i. Presidential Advisory Committee on Sexual Assault Annual Report 2025-26
6. Adjourn

University Senate

Proposed: November 13, 2026

Adopted: November 13, 2026

Minutes of the Meeting of October 23, 2026

95 of 104 University Senators were present.

The University Senate Plenary was called to order at 1:15pm. President Jennifer L. Mnookin welcomed everyone and turned the floor to Senator Jeanine D'Armiento (Ten., P&S), Executive Committee Chair. Sen. D'Armiento reminded attendees that only Senators may vote, using the raise hand icon in the reactions tab on Zoom, that recordings are not permitted in Plenary meetings, and asked Senators to remain until the conclusion of the votes, as several items required a supermajority.

Senators adopted the agenda.

Senators adopted the minutes of October 2, 2026.

President's Remarks

President Mnookin thanked Senators for their service and the Executive Committee in particular for its work. She noted that she had just come from ROARfest, thanked the teams that organized it, and invited all to attend Homecoming.

The President congratulated Michael Woodford, who was awarded the Nobel Prize in Economics for his work on the microeconomic foundations of macroeconomic stabilization. She also noted that five CUIMC faculty members were elected to the National Academy of Medicine. She noted the opening of the first residence hall specifically for General Studies students at 99 Claremont and the Vagelos Innovation Laboratories, the first all-electric biomedical research laboratory in New York City. She announced that the first Columbia Colloquium, an interdisciplinary faculty-led series, would take place the following Wednesday and discuss why universities matter. She invited attendees to see the series in-person or via livestream.

The President stated that the Campus Access Advisory Committee had begun meeting and that its work was underway. She stated that the International Students and Scholars Office (ISSO) is monitoring the Department of Homeland Security's proposed rule to increase fees for Optional Practical Training for students on F-1 visas and continues to work with students affected by earlier changes to Curricular Practical Training. She stated that, in her view, such policies are an enormous mistake given the value of international talent to Columbia, and that the University will continue to advocate against them as much as it is able.

The President noted that she had recently attended her first meeting of the Faculty of Arts and Sciences and the first meeting of this year's Presidential Advisory Committee on Sexual Assault.

She reported on several searches: the Dean of the School of Social Work, the Chief Executive Officer of CUIMC, the Executive Vice President for Health Sciences, and the Dean of the Faculties of Health Sciences and Medicine. She added that she was meeting with candidates for Vice President of Public Safety. The President then took questions.

Sen. Andrew Puthumana (Stu., CC) followed up on his question from the previous Plenary about the new application question asking international students why they want to study in the United States, asking whether there were updates on how responses are used to evaluate applicants. He also noted that only two of the 33 items in the federal resolution agreement remain listed as in progress and asked whether "satisfied" means the items are understood to be satisfied by Columbia or that the independent resolution monitor has agreed that the University is in compliance. The President responded that the University's report reflects its own assertion that the items have been satisfied, which remains under review by the independent monitor. She stated that she had asked her team about the admissions question, looked forward to speaking with the head of admissions, and understood that it is used as part of a holistic process, with no right or wrong answer.

Sen. Simon Ogundare (Stu., P&S) asked about the Office of Management and Budget (OMB) proposal that had been postponed to December. He stated that he had heard from colleagues that elements of the proposal were already shaping how research is reviewed, such as grant review questions that appear to have been drafted by non-experts. He asked whether the University would commit to asking its investigators directly, through a survey or other structured outreach, whether grant review has changed, and to report on the results. He also noted that, although NIH funding has largely been restored, labs continue to face substantial disruption in attracting researchers and sustaining their research missions and asked whether there is a plan to address this disruption in the short term. The President responded that she would ask Executive Vice President for Research Jeanette Wing, Provost Angela Olinto, and the deans whether there are structural steps the University could take to address concerns around research. She stated that it is concerning that some agencies are reportedly behaving as if the proposal were law, and that she supported structured outreach to principal investigators to investigate the issue. She stated that it is important for the scientific community to continue to resist excessive politicization of scientific judgment and to adhere to appropriate peer review regardless of who is in power.

Sen. Michael Thaddeus (Ten., A&S) stated that he wished to raise again the continuing closure of the University's gates, which he described as a profound public relations problem. He stated that local elected officials are now nearly unanimous in supporting reopening. He asked what specific security issues prevent reopening and why they are more acute at Columbia than at Harvard, UCLA, or hundreds of other universities without similar restrictions. The President responded that the charge of the Campus Access Advisory Committee, which includes three community members for the first time, is to help identify which challenges are real and help solve them. She further noted that she does not want the current situation to continue forever and would like the campus to be as open as possible, consistent with the University's mission and safety. She stated that there were legitimate concerns with the Morningside campus's small size relative to schools in less

dense settings, which contributed to the risk of campus becoming a performative protest space for people with no connection to the community. She stated that she regards the First Amendment as the North Star for speech, but that Columbia is not Washington Square Park. She also stated that international students have expressed differing views, with some strongly favoring open gates and others saying they feel more comfortable knowing the campus is not open to law enforcement, including ICE, and that the University would want to be able to close its gates temporarily in the event of a surge of enforcement activity in New York, as occurred in Minneapolis.

Chair's Report and Questions

Sen. D'Armiento thanked the President for her remarks. As a follow-up to her comments at the previous Plenary, she stated that faculty share concerns about student visa restrictions and federal loan changes, both of which limit students' access to a Columbia education, and that students would address these matters later in the meeting. She stated that the Senate is working with the President and the Campus Access Advisory Committee to provide advice on the campus gates and expects an engaged conversation. She summarized the plenary agenda, which included four resolutions from the Structure and Operations Committee, including one to amend the University Senate By-Laws to establish term limits for Committee chairs and a resolution on transition provisions for that amendment which would be taken up if it passed. She added that the third resolution was to refer the resolution to establish term limits on University Senate service back to the Structure and Operations Committee for further study and, if that resolution fails, there would be a vote on the fourth resolution to establish term limits on University Senate service. She noted that the first and last resolutions to amend the By-Laws would require a supermajority vote in favor to pass. Finally, she noted there would be a resolution for a program leading to the Master of Science in Biogenic Buildings and three statements and reports from the Student Affairs Committee, the Research Officers Committee, and the Commission on the Status of Women. She then opened the floor to questions.

Sen. Ogundare noted that one rationale for keeping the gates closed is that some students feel safer, but that Clery reports indicate crime, including intimate partner violence, has increased since the gates closed, and asked how to reconcile the argument for a safer campus with that reporting. He also asked about the increased surveillance of students within the gates, and whether the Senate has received any answers. Sen. D'Armiento responded that the Clery report had been received by the External Relations and Research Policy Committee, which will discuss it and likely report to the Senate and advise the Campus Access Advisory Committee, and that the increase in reported crime is surprising, though its causes are not known. She stated that the Senate has consistently asked who is being surveilled and where the information goes, that it has no information on this, and that it is of great concern to everyone on campus. She added that the Senate is considering holding a town hall on the gates issue.

Sen. Liane Bdair (Stu., CC) noted that most current students have not experienced an open campus and asked what baseline the community uses in judging safety. She also asked when the Senate's

responsibility on the gates and on safety goes beyond the opinions of individuals to the question of what environment the University should create. Sen. D'Armiento responded that the Senate and the President both want an open community with open gates and that the community is suffering from the closure, but that the University must proceed thoughtfully. She stated that a town hall would allow people to share their views with the President and the committee and that the administration must be able to manage what happens once the gates open.

Sen. Katherine Brooks (Libraries), who co-chairs the Campus Planning and Physical Development Committee and serves on the Campus Access Advisory Committee, asked how the Senate would interact with the newly formed Access Committee. Sen. D'Armiento responded that she and Vice Chair Sen. Holger Klein had met with the committee's chairs, that a joint meeting with the Campus Planning and Physical Development Committee was being planned, that the Access Committee would also meet with students, and that the Senate would likely hold a student-run town hall to gather input to feed back to the committee.

Sen. Nasser Odetallah (Stu., ARTS) stated that a notice had been sent to faculty and senior officers this week regarding the imminent departure of the Executive Vice President for University Facilities and Operations, a role that oversees the issues raised, but that the notice was not sent to the student body. He asked whether the Senate or its leadership had been informed and why the news was not shared with students. Sen. D'Armiento responded that the Senate received the announcement at about the same time as others, that she expected to receive more advance warning as the President becomes accustomed to the community, so that student leaders can be informed before announcements are made, and that the Senate would meet to discuss plans for the position.

Sen. Puthumana stated that the Task Force on Shared Governance includes two recently elected Senators, a committee chair, and a former Senator, but no student representatives or longer-tenured Senators, and asked whether consideration had been given to adding students to the task force and whether the Senate self-study would have a composition more reflective of the Senate as a whole. Sen. D'Armiento responded that the purpose of the self-study is to ensure representation from the Senate, including students, and that the membership was expected to be announced by the next Plenary. She stated that the self-study group is expected to work with the task force for a productive conversation with all stakeholders.

Resolution to Amend the University Senate By-Laws to Establish Term Limits on Committee Chair Service (Structure and Operations)

Sen. D'Armiento turned the floor to Sen. Henning Schulzrinne (Ten., SEAS), a member of the Structure and Operations Committee, to present the first of the Committee's resolutions, which required a supermajority. Sen. Schulzrinne noted that the resolution had been discussed at the previous Plenary. He stated that it would replace the current system, in which committee chairs may serve as long as they win re-election, with a limit of three consecutive terms, typically six

years, and that it applies only to Senate committees and not to the Executive Committee Chair, for whom separate provisions already exist.

Sen. Amy Hungerford (Executive Vice President of the Faculty of Arts and Sciences (EVPFAS)) asked what the rules are for the Executive Committee. Sen. D'Armiento responded that the Executive Committee Chair and Vice Chair already have term limits of three elections, which equates to six years. Sen. Schulzrinne added that the limits are structurally the same, but that the elections differ, as committee chairs are elected from among the members of the committee, while the Executive Committee Chair is elected by all Senators.

Senators voted on the resolution, which passed with 82 votes in favor, three opposed, and one abstention.

Resolution on Transition Provisions for the Amendment to Establish Term Limits on Committee Chair Service (Structure and Operations)

Sen. Schulzrinne stated that these transition provisions would take effect on September 1, 2027, as committee chair elections normally occur in odd-numbered years, with a six-year look-back beginning September 1, 2021, so that a person who has served three terms since that date would be ineligible to stand for re-election in the next round of committee chair elections.

Sen. Mahmood Mamdani (Ten., A&S) stated that his comments were relevant to all three resolutions. He distinguished between democratic term limits, imposed through elections, and statutory term limits, imposed from above, stating that the latter are not universal and that the rules differ where they apply. He noted that those who take on extra responsibility in departments are compensated through course reductions or financial compensation, whereas no Senator is compensated. He asked what the rationale is for piecemeal reform and why term limits do not apply to administrators, stating that if the goal is to prevent power from concentrating, other offices should not be exempt.

Sen. D'Armiento responded that she believes there is an imbalance, with people holding powerful positions in the institution for 20 to 30 years, and that the Senate review had recommended some recognition of Senators' service, including compensation, which was now being examined. She stated that the idea for committee chair term limits originated within the Senate before the proposed general term limits to rejuvenate the Senate by creating leadership opportunities. Sen. Mamdani responded that, regardless of its origin, the reform remains fragmentary and asked why the Senate does not begin with general rules for the whole institution. Sen. D'Armiento stated that the Senate must improve itself regardless of imbalances elsewhere in the University.

Sen. Schulzrinne stated that many department chairs are term-limited, which is important because colleagues, particularly those in small groups, can be reluctant to vote against one another, and a neutral rule avoids that issue. He stated that, procedurally, the Structure and Operations Committee has taken issues such as term limits and compensation incrementally because each is complicated,

and that this allows Senators to vote for the pieces they support rather than for everything or nothing. Sen. D'Armiento acknowledged that term limits are unequally distributed across the University, noting that some department chairs have served 25 to 35 years, but stated that the resolution came from the Senate and is intended to improve it.

Senators voted on the resolution, which passed with 82 votes in favor, none opposed, and three abstentions.

Resolution to Refer the Resolution to Establish Term Limits on University Senate Service to the Structure and Operations Committee (Structure and Operations)

Sen. D'Armiento stated that the Senate did not yet have consensus on the resolution to establish term limits on Senate service, and that this resolution, which required only a majority vote, would refer it back to the Structure and Operations Committee for further discussion. Sen. Schulzrinne recalled the lively and diverse discussion at the October 2 Plenary and stated that, considering that discussion and the chair term limits just adopted, the Committee requested this issue be referred back for further discussion and possible alternative approaches. He stated that if the referral passed, the resolution on Senate service would not be put to a vote.

Sen. John Santelli (Ten., SPH) stated that he strongly supported referral, as the Senate has not fully vetted the pros and cons of the Senate service resolution, which he personally considered a bad idea, whereas he was in favor of the committee chair resolution just adopted. He stated that the Senate needs a conversation with the Trustees, describing the proposal as the Trustees' idea, presented to the Senate with little rationale. Sen. D'Armiento responded that the Senate is a deliberative body that would continue to consider the matter, and that although the proposal began with the Trustees, the Senate took it on itself and can speak with the Trustees.

Sen. Adam Cannon (TTOT, SEAS) stated that he supports term limits, as did others who spoke at the previous Plenary, but was fine with referral. He stated that the aim is to broaden participation in the Senate, which term limits alone will not accomplish, that the Senate must also incentivize participation, as recommended by the Senate review, and that the two measures might be bundled. He stated that while many have noted there is currently not a significant population of extremely long-serving Senators, problems should be solved before they arise.

Sen. Puthumana stated that referral would allow the Senate to measure the effects of the chair term limits just adopted. He stated that students had originally proposed term limits in 1996, and that the questions regarding this proposal should be "why" and "why now". He further noted that the Senate is arguably in one of its most democratic iterations, noting that the Executive Committee Chair was formerly chosen at an in-person caucus of tenured faculty and that the current Chair is the first elected by all members. He stated that term limits on Senate service would affect only six Senators and that the chair term limits address many of the concerns about consolidation of power.

Sen. Ogundare seconded Sen. Puthumana's points, stating that he did not believe any student had been given a convincing reason why concentration of power exists in the Senate in its current form compared with the past, noting that Senators are volunteers. He stated that, absent convincing reasons, the resolution would be hard to pass and that students generally support referral.

Senators voted on the resolution, which passed with 76 votes in favor, one opposed, and two abstentions. As a result, the resolution to establish term limits on Senate service was not brought to a vote.

Resolution to Approve an Academic Program Leading to the Master of Science in Biogenic Buildings (Education)

Sen. D'Armiento turned the floor to Sen. Ulrich Hengst (Ten., P&S), Co-Chair of the Education Committee, to present the resolution, noting that Sen. David Benjamin (Ten., GSAPP), Director of the proposed program, was present to answer questions.

Sen. Hengst stated that the program, to be offered at the Graduate School of Architecture, Planning, and Preservation (GSAPP), aims to address the challenge of reducing carbon emissions associated with the materials used to construct buildings. He stated that it would prepare students to develop, test, and apply renewable, biologically derived materials, such as timber, hemp, or mycelium, and to translate this research into architectural design and construction. He stated that the program would begin in fall 2027 and would be an intensive, two-semester, 33-credit program combining coursework with hands-on research in an integrated design studio and materials laboratory. He stated that it builds on existing faculty expertise and courses and requires no new full-time faculty, and that it would initially enroll 20 to 30 students, with a projected steady-state enrollment of 50 students annually, a sizable portion of whom would likely come from other GSAPP programs. He stated that the Education Committee examined the program's format, the evidence of student and professional demand, and GSAPP's capacity to accommodate the anticipated enrollment, that the proposers provided detailed responses, and that the Committee voted unanimously in support.

Senators voted on the resolution, which passed with 77 votes in favor, none opposed, and one abstention.

Student Affairs Committee Statement on Protection of Student Status and Financial Affordability

Sen. D'Armiento turned the floor to the Student Affairs Committee leadership to present the Committee's statement. Sen. Odetallah read the statement, which was last revised three days earlier, expressing the Committee's deep concern and disappointment with the senior administration regarding a series of changes that have resulted in precarity for many student populations, and identifying five areas requiring action from the President and other senior administrators. First, regarding the change to duration of status visa regulations in July 2026, which shifted F and J visas to a fixed period of admission, the statement noted that there has been no

formal written message from the President in unequivocal support of international students, nor a plan to support them beyond referrals to ISSO, and stated that a public commitment is necessary now. Second, regarding changes to Curricular Practical Training and Optional Practical Training, the statement noted that many international students have expressed concern about their ability to complete their degrees and the lack of sufficient guidance, and that reported OPT changes have left students worried that high fees will be passed on to them. Third, regarding changes to graduate student federal loans that took effect July 1, 2026, the statement noted that the Committee had requested a plan of action for more than a year, that then-Acting President Shipman had assured students in spring 2026 that a plan was in development, and that in August 2026 Columbia Finance told the Committee that its sole solution was to refer students, in most cases, to two for-profit external lenders with no assurance of low interest rates or continued eligibility. The Committee stated that the University has an obligation to provide a variety of solutions, including emergency funds and flexible internal loan options.

Sen. Odetallah continued that, fourth, Student Financial Services notified students in advance of the new school year that financial holds would result in their being unenrolled from the semester in early September, undoing prior registration, which the Committee understood to be a significant departure from previous practice, with no rationale provided and no announcement to the larger student body. Fifth, in late August 2026 the registrar notified instructors and schools that students with financial holds can no longer be registered from a waitlist, regardless of available space or the instructor's wishes, a change the Committee understood took effect without faculty consultation and was not communicated to students. The statement concluded that, taken together, these changes make the ability to enroll and remain enrolled increasingly dependent on financial resources, and that the Committee continues to insist on concrete plans to support students.

Sen. Philip Creamer (Research Officer) stated his support for the statement on behalf of research scientists, noting that many who are not students also benefit from OPT and other visas and are impacted by these changes. Sen. D'Armiento stated that the statement was presented so that all Senators understand students' struggles, and that the Senate is working with different units of the administration to clarify the changes and help students navigate the new rules. Sen. Kim Phillips-Fein (Ten., A&S) thanked the Student Affairs Committee for the statement and stated that greater communication about these rules and their implications is sorely needed.

Research Officers Committee Annual Report 2025-26

Sen. D'Armiento turned the floor to Sen. Daniel Savin (Research Officer), Chair of the Research Officers Committee, to present the Committee's annual report, also noting that Nancy LoIacono, the Vice Chair, was also present. Sen. Savin stated that this would be his last report as Chair because of the newly approved committee chair term limits. He stated that the Committee consists of the six research officer Senators and three nonsenator research officers selected for balance across ranks and campuses, with a mandate to consider the terms and conditions of academic employment for research officers. He stated that the research officer population has shrunk by

about 10 percent during the current presidential administration, and that about half of postdoctoral research scientists and research fellows are foreign nationals.

Sen. Savin stated that the Committee's activities in the past year included discussions on research funding uncertainty, bridge funding, and the proposed OMB changes, in coordination with the Executive Committee, the External Relations and Research Policy Committee, and senior administrators, and that the Committee advised research officers to submit individual comments on the OMB proposal. He stated that the Committee continues to advocate for research professor titles for professional research officers who serve as principal investigators, who bring in about 10 percent of external support to Columbia at a per capita funding rate comparable to faculty. He stated that approximately 150 principal investigators would be eligible, that the titles already exist at Lamont-Doherty Earth Observatory, where they stemmed the loss of senior research scientists to faculty positions, and that they would allow principal investigators to raise nine rather than twelve months of salary, buffering reductions in federal funding and aiding recruitment and retention. He stated that the Committee is the only forum in which research officers interact directly with senior administration, and that the Senate's confidentiality policy allows the administration to bring proposed policy changes to the Committee for comment before decisions are final.

Sen. Savin stated that the Committee's plans for 2026-2027 include continued advocacy for research professorships, improvements in operational efficiency, bridge funding for research officers, and an enhanced severance policy for professional and staff research officers, whose positions are considered permanent but renewed annually and who may receive only a few months' notice of non-renewal. He stated that healthcare premiums are increasing faster than inflation and raises, which is not sustainable.

Sen. Sarah Hansen (TTOT, A&S) thanked Sen. Savin and asked about the importance of the title and how to support those in permanent renewable positions. Sen. Savin responded that while at Columbia research scientists must go through a tenure-like review, at other institutions, a research scientist is an entry-level position, so grant applications have been declined because it is not clear that the applicant is an independent principal investigator. He further noted that certain fellowships and grants are available only to those with the word "professor" in their title. He added that he is concerned about the University's institutional memory, as much of what the Committee has accomplished over the more than 20 years he has served on it is due to his ability to advocate across multiple provosts and presidents, and he feared the effect when long-serving Senators are no longer able to provide that knowledge.

Commission on the Status of Women Annual Report 2025-26

Sen. D'Armiento noted that the Commission on the Status of Women annual report was included in the Plenary materials. Sen. Ogundare stated, on behalf of the Student Affairs Committee, that students remain a strong ally of the Commission and the External Relations and Research Policy

Committee on the issue of Robert Hadden's abuse. He stated that this speaks to a culture that permits, explains, and excuses gender-based misconduct, which is especially concerning for students amid increasing reports of intimate partner violence and in the wake of recent events at Cornell. He stated that several questions had been compiled and presented regarding the independent investigation into Hadden, including why the particular law firm was chosen for the investigation and why its scope was restricted to the period before 2012. He stated that these questions had been sent to then-Acting President Shipman and the Board of Trustees, and that, absent a response, they had been raised publicly in a resolution at Plenary. He stated that these concerns are shared by survivors of Robert Hadden, allies, medical students, and elected officials, that nearly four months later the questions remain unanswered.

Sen. D'Armiento responded that, since the President is new and may not have the questions, the Senate would resend them to her and discuss the matter at the next Executive Committee meeting. Sen. Victoria Frye (Ten., SSW) stated that, as a member of PACSA, she is interested in how social and structural factors create environments in which sexual violence can be perpetrated with impunity, that policies lead to culture and culture reinforces policy, and that she and others on the committee see connections between how Hadden was enabled throughout his career and the culture on and beyond campus. Sen. D'Armiento asked that any further questions be sent to Dr. Monica Goldklang, Co-Chair of the Commission on the Status of Women.

Annual Officers Benefits Update 2027

Sen. D'Armiento turned the floor to Sara Leupp, Executive Director of Benefits, Office of Human Resources, to present the update. Ms. Leupp stated that open enrollment will run from November 2 to November 20, 2026. She stated that Progyny will replace Maven as the family building benefit provider, adding elective cryopreservation beginning January 1, 2027, and that, through a partnership with the Columbia Fertility Center, eligible participants who receive care there will receive three cycles of fertility treatment rather than two, along with additional months of storage. She stated that Support Link will replace TELUS Health as the employee assistance program and will pair faculty directly with an in-network counselor at the start of their six sessions, so that they need not switch providers if they require more sessions; that the international plan for faculty teaching abroad for six months or more will move from Cigna to Aetna and will offer in- and out-of-network coverage; and that Wealthy, a concierge elder services program, is available free to faculty.

Ms. Leupp stated that printed open enrollment brochures will now be opt-in, that a closed-circuit Benefits AI bot developed by CUIT had launched earlier this month, and that it draws only from University benefits pages and does not accept personalized or protected health information. She stated that there will be modest medical and prescription plan design changes, including changes to high-deductible health plan deductibles and formulary changes, and that medical plan contributions will increase 6.5 percent in 2027, consistent with the increase passed on to faculty in 2026 and below the 9 to 11 percent average increase for comparable New York metro employers.

She stated that dental costs will rise by about $0.60 to $2 per month in the DMO plan and $3 to $8 per month in the PPO plan, that vision costs will decrease, that the annual health reimbursement account contribution for Medicare-eligible retired faculty will increase by 55 percent to $3,250, with half for an eligible spouse, and that the support staff plan will move from Anthem to Aetna. She stated that benefits expos would be held on all three campuses, along with financial well-being sessions.

In response to a question from Sen. D'Armiento, Ms. Leupp stated that cryopreservation done in the past would not be covered, as the benefit begins January 1, 2027.

Sen. Christopher Munsell (TTOT, GSAPP) asked whether faculty and staff would receive a cost of living adjustment to offset the premium increase, and whether the University would consider keeping increases flat or in line with inflation, given that the plan is self-insured. Ms. Leupp responded that she could not speak to wages, and that although the plan is self-insured, the University does not have full control over costs. She stated that the plan covers over 32,000 lives and paid approximately $125 million in claims in the first half of 2026, that pharmacy spending rose 10.3 percent over the same period last year, driven by oncology drugs, GLP-1 medications, and anti-inflammatory drugs, and that regulatory changes, provider consolidation, and hospital contract renegotiations are placing downward pressure on employers. She stated that the University works with carriers and brokers and benchmarks against peers to keep increases as low as possible.

Sen. Munsell asked whether the University had considered a plan with a competitor to UnitedHealthcare, given its history of claim denials, citing his own experience in fertility planning and during his child's extended hospital stay. Ms. Leupp responded that the University issued a competitive request for proposals earlier this year covering medical, dental, vision, EAP, and family building benefits, with bids from Aetna, UnitedHealthcare, Cigna, and Anthem. She stated that the University had considered a multi-provider approach, including removing UnitedHealthcare, but concluded after reviewing its data that consolidating with one provider yields the most cost containment, which allows the increase to be limited to 6.5 percent. She stated that the concerns are valid, that the University has had conversations with UnitedHealthcare leadership about claims processing, denials, and appeals, and that UnitedHealthcare committed during the process to continue those conversations. She added that the contract signed does not preclude revisiting the arrangement in future years. Sen. Munsell added that the University should hold UnitedHealthcare accountable for what he stated is the highest published claim denial rate among its peers, and that junior faculty who have spent six figures on family planning find the cost unfair given the University's resources.

Sen. Creamer stated that the increase is concerning to many research officers and that he supports considering ways to reduce costs for research officers and to reduce claim denials, even if that means higher premiums. Sen. Melinda Aquino (Admin. Staff, Morningside) thanked Ms. Leupp, stated that the 6.5 percent increase is disproportionate relative to cost of living and wage increases,

noted the importance of maintaining backup care for administrative staff, and asked about changes to specialty pharmacy prescriptions, stating that her family and others pay over $20,000 out of pocket. Ms. Leupp responded that all UnitedHealthcare plans have an out-of-pocket maximum, so that no one should individually pay $20,000 or more, and that specialty 30-day copays will increase by about $5 to $10 in 2027. She stated that prescription copays have not changed in her nearly ten years at Columbia and remain on the lower end compared with peers such as Princeton, NYU, and Penn.

Sen. D'Armiento asked whether there is a way for people to interact with someone at the University about denied claims. Ms. Leupp responded that anyone experiencing a denial should email or call her directly, and that she will bring it to the UnitedHealthcare account executive team for research and next steps. Sen. Hungerford asked about coverage for compounded drugs and whether there is a process for considering it. Ms. Leupp responded that the plan does not currently cover compounded medications, consistent with near universal exclusion among higher education institutions and large employers, but that the policy may need a refresh, and that she would take the question back and consult with clinical colleagues uptown about possible modifications, perhaps for 2028. Sen. D'Armiento stated that the Benefits Committee is looking into the cost issue, that healthcare costs are not sustainable for employers, and that the Senate would work with the administration to see what can be done.

Sen. D'Armiento returned the floor to President Mnookin. The President thanked Senators for their engagement and noted that the next Plenary will take place in person on November 13 at Miller Theatre, at the earlier time of 12:30pm. The meeting was adjourned at 3:15 p.m.

Respectfully submitted,
Senate staff



UNIVERSITY SENATE · 2026–2027 SESSION

Parliamentary Procedure Guide

IN-PERSON MEETINGS

QUORUM

Half of all sitting Senators (typically 90 to 111 senators).

VOTING

- Only Senators present may vote.
- **Default:** A motion passes if more Senators vote for than against it. (This always applies to amendments to motions even if the main motion requires a super-majority.)

EXCEPTIONS

- **Parliamentary exceptions:** 2/3 vote required for certain motions. The motion passes only if twice as many Senators vote for as vote against it. This includes:
  - Previous question (close debate and vote)
  - Suspend the rules (allow something normally not allowed)
  - Change the order of business
  - Limit or extend debate
- **University Senate exceptions:** The following actions require at least 3/5 of all Senators to vote in favor:
  - Amendments to University Senate By-Laws
  - Proposed amendments to University Statutes (including new degree types, for example)

DEBATE

- Only Senators can speak, with limited exceptions (officers of schools or committee members presenting reports).
- You may speak only when the chair calls upon you.
- **Germane:** Speak only about the merits of the motion on the floor.
- **Courteous:** Never speak ill of another Senator.
- **Brief:** No more than 10 minutes without permission of the Senate (2/3 vote).
- **Engaged:** No reading from lengthy documents without permission (2/3 vote).
- **Don't hog the floor:** Don't speak more than twice on same motion without permission (2/3 vote).

AMENDMENT RULES

- Must be germane to the main motion.
- Cannot just reverse the main motion.
- Can be amended only once (no amendments to amendments of amendments).
- Must be voted on before the main motion. (To postpone a vote on an amendment, you must postpone the vote on the main motion.)

SOME PRIVILEGED AND INCIDENTAL MOTIONS: ALMOST ALWAYS IN ORDER

- **Point of order:** To point out that the rules are not being followed. Chair rules on it immediately. Chair's decision may be appealed. Appeal is decided by majority vote—ties go to the chair.
- **Point of privilege (personal or general):** To point out an urgent condition preventing one or more Senators from fully participating. Chair rules on it immediately and acts.
- **Call for the order of the day:** If the Senate is not following its agenda. Chair rules immediately.
- **Adjourn:** To close the meeting.

SUBSIDIARY MOTIONS

- **Motion to refer:** The motion to refer is a subsidiary motion. It attaches to a main motion. If approved, it sends the main motion to a committee to consider. It is debatable and requires a majority vote even if the main motion requires 2/3 or 3/5.

University Senate

Proposed: November 13, 2026

Adopted: November 13, 2026

64-0-0: In favor-opposed-abstained

RESOLUTION TO APPROVE AN ACADEMIC PROGRAM LEADING TO THE ADVANCED CERTIFICATE IN EXECUTIVE LEADERSHIP FOR CLIMATE DISASTER MANAGEMENT (Climate School)

WHEREAS climate-related disasters are occurring with increasing frequency and severity, requiring specialized expertise for executives facing these unprecedented challenges; and

WHEREAS mid- and senior-level professionals have requested credentials in disaster risk management, offered in a format that accommodates their work schedules and focuses on immediate workplace application; and

WHEREAS the Climate School currently offers an Advanced Certificate in Climate Disaster Management embedded in the Master of Science in Climate, and this program will reach new prospective students through a primarily online format while drawing on existing faculty expertise; and

WHEREAS the program will require the completion of 15 credits over two semesters, twenty-eight weeks online and two weeks in person, adapting courses from the embedded Climate Disaster Management Certificate for this format, with content tailored to the executive audience;

THEREFORE BE IT RESOLVED that the University Senate approve the Advanced Certificate in Executive Leadership for Climate Disaster Management; and

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

Proponent: Education Committee

Executive Summary| Advanced Certificate in Executive Leadership for Climate Disaster Management

Proposal summary

The Columbia Climate School proposes a standalone Advanced Certificate in Executive Leadership for Climate Disaster Management, beginning in Fall 2027. The 15-credit program targets mid- and senior-level professionals in risk, operations, finance, sustainability, and compliance who seek practical training without leaving employment for a full graduate degree. It draws on the MS in Climate's embedded certificate but adds executive-focused content, disaster finance, and client-based applied learning. The School cites professional inquiries and market research as evidence of need.

Students complete four 3-credit core courses and two 1.5-credit Applied Learning courses over two 15-week semesters, with no electives. Core instruction covers climate and disaster management, quantitative risk analysis, business continuity and recovery, and disaster finance. Each student develops a client-approved Resilience Initiative: first analyzing project-level climate risks, then proposing an actionable response incorporating continuity, financial, and cross-functional assessments. Faculty grade all deliverables. Delivery combines 79 percent online instruction with two required one-week intensives in New York City; total work averages 22.5 hours per week.

Estimated tuition is $37,500, with scholarships equivalent to 10 percent of tuition revenue. Enrollment is projected to grow from 15 to 40, in sections capped at 20 with separate instructors and course assistants. The Climate School requires 10 students to launch and reports first-year break-even at eight. The program relies on existing personnel and University systems. Students receive faculty advising and quantitative support; annual program reviews and a full first-year evaluation will assess quality and performance.

Education Committee review

The October 29, 2026, committee report finds the revised submission materially stronger and provides a reasonable basis for approval by the senate. Its central academic correction is the explicit commitment to a project-level Resilience Initiative rather than a comprehensive organizational continuity plan. Revised syllabi now align the learning sequence and assessments with that outcome. The response also maps executive content to courses, accounts for instructional and independent-work hours, clarifies admissions and prerequisites, and explains client confidentiality, replacement projects, and staffing by section.

Implementation items remain confirmation of Committee on Instruction approval for four new or revised courses, expected by November 5, 2026; final course numbers and syllabi; common assessment rubrics and consolidated client guidance; and verification of teaching, supervision, and advising capacity before adding a second section.

The principal unresolved business question is demand at the proposed price. Professional interest and evidence favoring hybrid study do not establish willingness to pay $37,500 or sustain 40 students annually.

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Proposal for New Degree, New Degree from Existing Track, or New Certificate

Please insert the requested information in the table below:

Degree:	Advanced Certificate
Program Name:	Executive Leadership for Climate Disaster Management
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:	This program draws on courses in the Adv Cert in Climate and Disaster Management in the MS in Climate program. However, this certificate is not replacing the existing Adv Cert.
Sponsoring School(s):	Columbia Climate School
Proposed Start Date:	Fall 2027
Name and Email Address of the Primary Contact Person for this Proposal:	Alix Schroder, aschroder@climate.columbia.edu
Date of Proposal Submission:	July 6, 2026

June 2026

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 Advanced Certificate (AC) in Executive Leadership for Climate Disaster Management is a 15-credit stand-alone certificate designed specifically for mid- and senior-level professionals at the forefront of organizational risk and resilience. Developed and delivered by the Columbia Climate School, this standalone certificate program directly addresses industry demand for advanced, immediately applicable training in disaster risk management and organizational continuity in a rapidly changing climate.

The AC serves experienced professionals — such as those in risk management, business continuity, operations, or regulatory compliance — who seek practical, high-impact skills and credentials without committing to a full graduate degree. The program blends live online coursework with immersive in-person sessions in New York City. The program design accommodates busy professional schedules while delivering actionable training in disaster crisis management and regulatory readiness through interactive, case-based learning led by Columbia Climate School faculty and seasoned industry practitioners. This approach emphasizes real-world applications for climate and disaster strategies, supporting asset protection, operational continuity, and enhanced organizational resilience to advance both career and leadership effectiveness in private and public sectors. While the curriculum, audience, and modality are purposefully distinct, the certificate will be held to the same academic standards as the Climate School's on-campus graduate offerings, including credit hours, COI approvals, graduate admissions baseline, and the same grading and academic-standing requirements.

Course topics will cover the following areas:

- *Climate Change and Disaster Management:* Domestic and international frameworks, emergency management, and resilience stakeholders.
- *Post-Disaster Recovery: Focus on Housing and Economic Recovery:* Legal frameworks, public programs, and organizational strategies for minimizing loss and maximizing recovery.
- *Applied Disaster Research Methods:* Data, methods, and analytical frameworks for resilience strategy and decision-making.
- *Disaster Finance:* Funding streams across the disaster cycle and methods for capturing value in avoided loss.
- *Applied Learning Course:* Development of a practical "Resilience Initiative" spanning climate risk research to an operational resiliency plan.

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?

The Advanced Certificate is a new, standalone credential distinct from existing Climate School and other Columbia programs. This AC purposefully draws on curriculum from the Climate School MS in Climate's Advanced Certificate in Climate and Disaster Management and leverages faculty expertise from across the Climate School, but it does not duplicate existing offerings.

The key differentiator between this new AC and the existing Advanced Certificate is the modality and audience. The existing Advanced Certificate is embedded within the MS in Climate program, which requires students to complete a certificate as part of their full-time two-year degree program. The new AC is a standalone certificate that refines this existing academic foundation to address the specific needs of experienced professionals and decision-makers around climate change and disaster management over two semesters. Specifically, the program includes a specialized focus on executive-level skills and immediate workplace application rather than early-career development or academic pathways. Building from the strengths of the existing curriculum in the MS in Climate, this certificate extends Columbia's educational offerings to serve working professionals seeking targeted, high-impact training in disaster management that can be attained over a shorter period of time than a full-time graduate degree.

Columbia also offers some disaster-related coursework through the School of Professional Studies and the Mailman School of Public Health. However, none of the existing programs and coursework approach disaster and climate management from the executive, cross-disciplinary perspective central to this proposed AC. Additionally, this would be the first stand-alone AC focused exclusively on the intersection of disaster management, risk, and climate.

2) Need

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

Climate-related disasters are occurring with unprecedented frequency, impact, and geographic reach, threatening organizational continuity, public safety, and economic stability at every scale. Rapidly evolving regulations, supply chain vulnerabilities, and reputational risks require leadership fluent in climate risk assessment, disaster preparedness, financial resilience, and compliance frameworks. New York and the Northeast, as global business and economic hubs, are particularly exposed to these challenges, and there is an urgent regional and national need for a program that directly addresses executive disaster management training.

This program is designed specifically for mid- to senior-level executives responsible for managing climate-related risks within their organizations. As climate disasters increase in frequency and severity, these leaders face unprecedented challenges that threaten operational continuity, financial stability, and reputational integrity. The Advanced Certificate (AC) addresses the critical need for specialized expertise, providing executives with the knowledge and skills required to assess climate risks, lead disaster preparedness efforts, and ensure regulatory compliance.

For busy professionals, this program offers a strategic, practical learning experience that fits within demanding schedules while delivering immediate, actionable insights. The AC equips leaders with the tools to make informed decisions during crises, build resilient business models, and drive sustainable growth. By closing the gap between traditional academic programs and real-world executive needs, the

AC empowers its participants to lead their organizations confidently through climate uncertainty and thrive in a rapidly evolving risk landscape.

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

Yes. Columbia faculty and Climate School administrators have received numerous requests from executives and other mid to high-level professionals seeking short-term, high-impact credentials focused on actionable disaster management and climate risk skills. Market analysis indicates strong professional learning demand for disaster management content, with robust interest in programs offering applied learning and executive focus. Additionally, with the launch of the Advanced Certificate in Climate and Disaster Management, which sits within the MS in Climate, we received many inquiries asking if the certificate could be taken independently. These have come from professionals in careers who are otherwise unable to commit to a full-time Master's program but interested in a stand-alone certificate program.

Additionally, an analysis prepared by Huron Consulting Group to inform future degree program development included the following highlights specific to disaster management:

- 19 out of 31 current students ranked disaster preparedness as "very or extremely important."
- 18 out of 27 prospective students indicated "interested or very interested" in disaster management.
- 68% of alumni ranked disaster management as "very or extremely important."

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 considered when designing the program?

Yes. Industry partners and employers have actively sought executive-focused, credentialed training in disaster risk management, continuity planning, and climate resilience—distinct from traditional academic or emergency management degrees. Market analysis and employer engagement have informed the curriculum structure, prioritizing immediately applicable tools, assessment frameworks, crisis-tested business strategies, and regulatory readiness needed by organizational leaders in the private sector and beyond.

Recent global talent and corporate risk indices highlight a widening skills gap that uniquely validates the need for a targeted, short-format credential rather than a full-time degree. According to LinkedIn's 2025 Global Green Skills Report, the hiring rate for climate-competent talent is expanding nearly twice as fast as the workforce is acquiring these skills (7.7% growth vs. 4.3%). Crucially, the report reveals that 53% of these hires are occurring in traditional corporate roles (such as operations, finance, and logistics) where professionals must layer climate competencies over their existing responsibilities. Rather than hiring standalone niche scientists, modern organizations are actively seeking to upskill their current leadership to embed resilience directly into corporate strategy.

This operational urgency is further supported by Marsh's 2026 Climate Adaptation Survey, which found that 75% of businesses have already suffered direct operational disruptions or physical asset losses due to extreme weather. While over half of the surveyed corporations are actively upgrading or implementing formal Business Continuity Management (BCM) plans, BCM was highlighted as the primary area where organizations face a "translation gap"—meaning they understand the high-level climate hazards but lack leaders trained to translate that data into immediate operational risk mitigation.

June 2026

The Huron market analysis confirmed that 7 out of 12 surveyed employers explicitly listed disaster preparedness as a preferred leadership skill. There is an expanding need for strategists who are technically equipped to evaluate climate risk and execute plans for the long-term recovery and rebuilding phases following a disruptive event. Recognizing this structural shift, major public sector policy institutions, including the World Bank, have intensified mandates for climate and disaster risk screening as a baseline component of national adaptation plans. In tandem, premier private sector advisory firms like Deloitte and Ernst & Young (EY) have rapidly expanded their risk advisory practices to guide corporate clients through extreme weather disruptions and supply chain vulnerabilities. This certificate directly answers these documented employment demands by equipping mid- to late-career executives with the actionable, crisis-tested tools required to safeguard their organizations.

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

A review of similar programs revealed a number of other institutions offering emergency or disaster management graduate degrees and certificate programs. However, these are generally focused on the emergency management profession or specific sectors such as environmental management or public health. Notably, the proposed Advanced Certificate is distinct in the landscape of existing certificate programs, as existing programs primarily concentrate on narrower sectoral or professional focuses rather than integrated climate and disaster management tailored specifically for mid to senior organizational decision-makers.

Examples of similar certificate programs are listed below, with those in the Northeast listed first.

Institution	Program	Description
New York University	Advanced Certificate in Public Health Disaster Science, Policy and Practice	Offers online and in-person options for mid-career professionals interested in a multi-disciplinary approach to the scholarship, policies, and practices associated with preventing, preparing for, responding to, and recovering from public health disasters and complex emergencies.
New York Medical College	Advanced Certificate in Emergency Management	Teaches best practices for ensuring that early and mid-career professionals learn how to keep their organizations and communities safe when an emergency occurs.
University of Colorado Denver	Graduate Certificate in Disasters, Hazards and Emergency Management	A twelve-credit program emphasizing interdisciplinary skills, policy analysis and community resilience planning in all-hazards emergency management.
Tulane University	Graduate Certificate in Disaster Resilience Leadership	Disaster preparedness, management, and recovery program that focuses on effective resilience models providing positive outcomes from the individual to community level.
University of North Carolina	Certificate of Community Preparedness and Disaster Management	Online program with three courses focused on community and public health security and emergency management.
Arizona State University	Online Emergency Management Graduate Certificate	Provides the skills and knowledge to manage and assume positions of leadership in government, private, nonprofit and civic roles within the field of emergency management.

3) Curriculum

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

This Advanced Certificate equips experienced professionals with executive-ready skills for climate and disaster risk management, focusing on immediately applicable disaster finance, regulatory compliance, and post-disaster business recovery. Students participate in a dynamic, primarily online cohort, engaging with Columbia faculty and industry leaders over 30 weeks (2 semesters) to earn a high-impact, 15-credit credential.

The Executive Leadership for Climate Disaster Management Advanced Certificate is designed to deliver executive professionals intensive, practical training in managing climate-related disaster risks within organizational contexts. Tailored around the demanding schedules of working executives, the certificate focuses on equipping mid- to senior-level leaders in the private and public sectors with the immediate, real-world skills required for strategic decision-making and organizational resilience.

The curriculum provides a concise yet rigorous foundation in risk assessment, business continuity, disaster finance, and regulatory compliance through a set of required courses. These courses include modules tailored to address the immediate needs of organizational leaders dealing with supply chain disruptions, crisis management, and long-term resilience strategies. Learning is applied, case-based, and executive-focused, emphasizing practical tools and real-world frameworks that facilitate effective leadership in disaster preparedness, response, and recovery.

The program curriculum is specifically designed to complement the professional experience of executives while delivering the focused knowledge necessary to drive climate resilience at the organizational level. It centers on areas most pertinent to working professionals, highlighting practical approaches and actionable strategies, and including specialized modules tailored for business leaders. The courses include:

- *Climate Change and Disaster Management:* Emphasizing financial exposure, supply chain disruptions, and business continuity planning within climate adaptation scenarios.
- *Applied Disaster Research Method:* Focusing on quantitative risk assessment and modeling, including GIS-based financial risk mapping and index development for insurance or asset valuation as well as models for managing uncertainty across numerous data sources and context variables.
- *Post-Disaster Recovery: Focus on Housing and Economic Recovery:* Concentrating on business operations, fiscal recovery frameworks, and enterprise continuity post-disaster.
- *Disaster Finance:* Oriented on financial instruments, incentives, and investment strategies that strengthen disaster resilience and mitigate fiscal losses.
- *Applied Learning Course:* A practical, applied culminating project across two semesters where professionals develop a tailored "Resilience Initiative" for their own organization or a selected client. In the first term, students conduct baseline research, evaluating localized climate vulnerabilities and risks. In the second term, students translate this research into actionable organizational deliverables, identifying specific financial instruments for disaster mitigation and drafting a comprehensive continuity-of-operations plan that accounts for climate-driven supply chain disruptions.

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).

Students must complete 15 credits for the certificate (six courses: four 3-credit courses plus a two-part applied learning course of 1.5 credits each). Each credit in the certificate represents a minimum of 45 hours of student learning time (15 hours instruction and 30 hours of supplementary out of class work) consistent with the credit standard for all Climate School graduate coursework.

In addition to the 15 credits, students are required to attend both one-week in-person intensives held on Columbia's New York City campus at the beginning and end of the program. Attendance at both is required for completion of the certificate.

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).

Below is a list of the required courses in the certificate, all offered in the Climate School. There are no elective or selective credits required for this AC.

REQUIRED COURSES **Minimum number of required credits = 15**	**School**	**Course Number (indicate if course is NEW)**	**Course Title & Instructor**	**Indicate whether course is fully, partially, or not at all online**	**# of Credits**
	CCS	CLMT 5010	Climate Change and Disaster Management (Jeff Schlegelmilch)	Online	3
	CCS	CLMT 5020	Post-Disaster Recovery: Focus on Housing and Economic Recovery* (Thomas Chandler, Josh DeVincenzo)	Online	3
	CCS	CLMT 5032	Applied Disaster Research Methods* (Jonathan Sury)	Online	3
	CCS	CLMT NEW	Disaster Finance (Jeff Schlegelmilch)	Online	3
	CCS	CLMT NEW	Applied Learning Phase 1: Risk Analysis (Ashley Curtis)	Online	1.5
	CCS	CLMT NEW	Applied Learning Phase 2: Resilience Planning (Ashley Curtis)	Online	1.5

**This Advanced Certificate draws on existing courses from the MS in Climate's "Climate and Disaster Management" embedded advanced certificate. The existing courses listed above will be offered as separate online sections for Executive Leadership Advanced Certificate students. To ensure the content is most relevant to the professional audience we're targeting, the faculty teaching team plans to update these courses for an executive audience; those changes are noted below. Please note that the changes will affect no more than 30% of the total course content. Course titles may also be updated for clarity, but the core content and focus of each course will remain consistent.*

Existing Climate School Courses	*Content Updates to Tailor for New Audience*
CLMT 5010: Climate Change and Disaster Management	*Include supply chain impacts, business interruption, societal co-dependencies*
CLMT 5032: Applied Disaster Research Methods	*Add risk analysis methods (including GIS and Index development)*
CLMT 5020: Post Disaster Housing and Economic Recovery	*Highlight business recovery*

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."

Semester 1: FALL 1			
Course Number & Title	**Credits**	**New?**	**Prerequisites**
CLMT 5010: Climate Change and Disaster Management	3	No	None
CLMT 5032: Applied Disaster Research Methods	3	No	None
CLMT NEW: Applied Learning Phase 1: Risk Analysis	1.5	Yes	None
TOTAL CREDITS FOR SEMESTER:	7.5		
Semester 2: SPRING 1			
Course Number & Title	**Credits**	**New?**	**Prerequisites**
CLMT 5020: Post-Disaster Recovery: Focus on Housing and Economic Recovery	3	No	None
CLMT NEW: Disaster Finance	3	Yes	None
CLMT NEW: Applied Learning Phase 2: Resilience Planning	1.5	Yes	None
TOTAL CREDITS FOR SEMESTER:	7.5		

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.*

Typical weeks in the Academic Year = **30 weeks**

- Fall semester: 15 weeks
- Spring semester: 15 weeks

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.*

The total number of weeks it would take a typical part-time student to complete the program is **30 weeks**.
As this AC is designed for working professionals, a full-time option is not currently available.

- Fall: 15 weeks

June 2026

- Spring: 15 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.*

No. For the Advanced Certificate, all required courses (15 credits) within the certificate will be offered directly through the Climate School.

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.

New courses for this certificate include the following:

- CLMT NEW: Disaster Finance (3 credits)
  - **Approved by COI in September 2026*
- CLMT NEW: Applied Learning Phase 1: Risk Analysis (1.5 credits)
  - **In COI review*
- CLMT NEW: Applied Learning Phase 2: Resilience Planning (1.5 credits)
  - **In COI review*

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

This Advanced Certificate is a standalone credential designed specifically for executive professionals and is not intended to be counted towards other degrees within the Climate School. Students will not be able to apply credits earned in this AC towards a Climate School degree program, per the Climate School's transfer policy (https://www.climate.columbia.edu/transfer-policies).

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***.**

Yes. Columbia's libraries already have significant resources to support climate and environmental research – diverse collections, data sets, subject specialists, and more. A few initial points for collaboration were identified, noted below, and we will continue to engage the Columbia libraries on the development of materials and support for students in the Advanced Certificate.

- Climate-Specific Resources: Access to extensive resources on climate and related topics, which the Libraries have been increasing in recent years. Climate justice, in particular, is a growing area of research in which they wish to expand their resources.
  - *Libraries have been building up resources on disasters (e.g., wildfires, floods) recently and have existing material in their collections on disaster finance.*
- Data Research Services – technical help through individual consultations, bootcamps, and workshops for Python, R, Stata, SPSS, GIS, and JavaScript.
- Data Sets and Collections – if we need any specific data sets not currently in the libraries, we can request that the libraries acquire them.

- Research Support and Guides – individual or course library instruction sessions, notably for the applied learning course.
- Executive Programs Support – existing resources that support the Executive MBA program at the Business School may be of interest. They also support subscriptions to Bloomberg Terminals and recently subscribed to Bloomberg.com which may also be of interest.

5) Faculty

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

The program director will be Jeff Schlegelmilch, Professor of Professional Practice at the Climate School and Faculty Director of the National Center for Disaster Preparedness (NCDP) within the Climate School. It is estimated that approximately 10% effort will be dedicated to program administration.

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.

This program will not require the hiring of new full-time faculty. Instruction is guided by current Columbia Climate School faculty. The Advanced Certificate courses will be taught by a mix of existing full-time and part-time Climate School faculty, known for their academic rigor and innovative research in climate and disaster management.

Jeff Schlegelmilch, Professor of Professional Practice at the Climate School who currently leads the MS in Climate's Advanced Certificate in Climate and Disaster Management, will teach at least one of the new AC courses. Other courses will be taught by Officers of Research (OORs) from the National Center for Disaster Preparedness (NCDP), who bring deep expertise in disaster risk and management, along with substantial experience collaborating directly with industry partners and practitioners. These OORs have a strong history of teaching in existing Climate School programs, as well as to executive and professional audiences, and are well-equipped to translate cutting-edge research and field-tested frameworks into immediately applicable tools for organizational leaders. The instructors identified for this certificate have extensive experience teaching in fully online, hybrid, and in-person formats.

While the majority of the courses will be taught by full-time faculty or OORs, the teaching team for this AC may be further enhanced by leading industry professionals who will serve as adjunct instructors, bringing valuable real-world expertise and applied perspectives into the classroom. This dynamic blend of scholarly faculty and seasoned practitioners ensures the curriculum is both academically rigorous and practically relevant, equipping organizational leaders with the strategic skills and knowledge needed for effective decision-making in climate risk and disaster management.

All faculty are directed to Columbia's Center for Teaching and Learning (CTL) resources for online instruction, and the program will offer dedicated online pedagogy training for all instructors, including adjuncts, before their first term of teaching, covering course design, facilitation, and assessment for remote delivery.

6) Students

A) Describe the requirements for admission to the program.

All students will be admitted into the Advanced Certificate in Executive Leadership for Climate Disaster

Management with the requirements listed below:

Deadline for Fall Admission:	July 1 (2 months prior to program start)
Resume Requirement:	Yes
Writing Sample:	Yes
GRE General:	No
Degree Programs:	Yes
Free-Standing:	No
Letters of Recommendation:	2

Due to the interdisciplinary nature of climate and its complex impacts, this program will admit students from a wide variety of academic and professional backgrounds. Admission to the AC in Executive Leadership for Climate Disaster Management program is selective and designed for mid- to senior-level professionals and experienced decision-makers seeking to enhance their expertise in organizational resilience. A minimum of 3-5 years of professional experience is recommended. There is some variability, as the admission process will holistically review executive readiness and career trajectory over traditional metrics such as GPA. Applicants are expected to have established professional backgrounds in areas such as risk management, business continuity, operations, or regulatory compliance, alongside standard academic qualifications. Successful candidates typically exhibit strong critical thinking, leadership, and analytical skills as evident from their professional background and achievements.

Students must additionally identify the client for their Applied Learning Course in their application (typically their current organization, but other clients may be selected based on mutual agreement). Applicants are advised to provide a letter of recommendation from their employer in support of their efforts if possible, or alternatively, a letter from an external organization indicating their willingness to work with the student in the applied learning course.

An additional writing sample may be required for shortlisted applicants to assess program fit and readiness for a delivery format, that is primarily live online learning but also includes two required one-week in-person intensives on Columbia's New York City campus. Admissions decisions are made through a holistic review process that prioritizes executive readiness and career trajectory over GPA or other singular academic metrics.

In addition to the requirements listed above, all applicants must have a Bachelor of Arts or Science, a statement of purpose, and two letters of recommendation. Applicants also must be able to articulate what knowledge and skills they are looking to develop through the AC and their professional goals after completing the program.

International students are eligible for admission but must meet English proficiency requirements. The Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or the Duolingo English Test is required for international applicants who did not complete their undergraduate degree from an institution in which English is the primary language of instruction. As the certificate is strictly part-time and primarily virtual, it does not offer a full-time study option.

June 2026

Some undergraduate-level coursework related to climate or a related topic is desirable but not required. Similarly, knowledge of calculus, introductory statistics or data analysis at the undergraduate level, and some social science coursework or related practical experience are preferred but not mandatory for admission.

Financial aid is available for this program. In addition, the program commits to awarding scholarships equivalent to 10% of tuition revenue to support access for admitted students.

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.

Total Enrollment in the Advanced Certificate

Academic Year	Expected Enrollment
2027-2028	15
2028-2029	20
2029-2030	30
2030-2031	40
2031-2032	40

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.

This certificate program specifically targets mid- to senior-level professionals, focusing on organizational and executive leaders who are already established in their fields. By design, it provides advanced competencies in disaster risk management that intersect with career emergency management expertise. While professionals in program manager and leadership roles within government and non-government organizations are involved in disaster management (e.g., FEMA, Local/State EM Agencies) or complex humanitarian crises (e.g., UNDRR, WHO, UNICEF) may benefit from these skills, the program primarily targets mid- to senior-level private sector leaders already established in their fields across diverse sectors.

Within the private sector, the program will benefit senior risk managers, corporate social responsibility leaders building disaster resilience in their initiatives, and professionals working in financial investments and market-based risk mitigation tools such as catastrophe bonds and ESG analysis. The focus on mid-senior executives emphasizes strategic leadership skills necessary for integrating climate and disaster risk management into organizational decision-making.

Reflecting a growing trend of upskilling current leadership to embed resilience directly into corporate and institutional strategy, this certificate is designed for professionals who will lead these functions within

their organizations, not those seeking entry-level specialist roles. Accordingly, its focus is on immediate executive application, not academic foundation-building.

Climate Disaster Risk Management Job Examples		
Private Sector	**Public Sector**	**Non-Profit Sector**
Sustainability Manager	Emergency Management Coordinator	Climate Resilience Program Manager
Climate Risk Manager	Hazard Mitigation Planner	Disaster Risk Reduction Program Manager
Senior Risk Manager	State/City Sustainability Program Manager	Director of Humanitarian Response
Chief Sustainability Officer	Emergency Management Director	Chief Resilience Officer

7) Online Delivery

If the proposed program will have an on-line 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 outcomes, and assessment methods; and if not, indicate how they will differ.**

This is a primarily online program with required in-person sessions, scheduled to accommodate busy professionals. The academic standard matches the Climate School's on-campus graduate offerings; the program differs in pedagogical approach and audience, not in rigor.

There is no difference between the online and in-person components with respect to content, student learning outcomes, or assessment methods: all instruction is delivered against the same learning outcomes and assessed by the same methods and grading standards. Admission applies the same academic baseline as the School's on-campus graduate programs — a completed bachelor's degree, statement of purpose, two letters of recommendation, and the same English-proficiency thresholds — with an additional screen for professional experience and executive readiness, layered on that baseline rather than substituting for it. Instruction is likewise case-based and oriented toward immediate organizational application rather than academic foundation-building: the approach is adapted to the audience; the standard is unchanged.

Participants engage directly with Columbia faculty and industry experts through interactive virtual classes. Each course meets weekly for scheduled synchronous sessions on Columbia Zoom, led by the instructor of record and scheduled to accommodate working professionals. With cohorts of 15–40 students, faculty run these as interactive seminars combining short framing lectures with live Q&A, moderated discussion, breakout rooms for small-group case analysis and peer review, guest practitioner panels, and structured cohort networking time. Attendance and participation are expected, recorded, and graded, and are complemented by asynchronous instruction in Courseworks, virtual office hours, and individual consultations on each student's Resilience Initiative. These classes are complemented by two on-campus experiences in New York City: in-person intensives of approximately one week each at the start and end of the program.

The in-person intensives are classroom-based and run as full-day sessions combining faculty lectures, facilitated roundtable discussions with industry practitioners, and interactive case-based exercises and teamwork. The opening intensive establishes the foundational frameworks for the program, forms the cohort, and scopes each student's Applied Learning client engagement. The closing intensive is where students present their culminating Resilience Initiative and receive structured feedback from faculty and practitioner panels. Both intensives are integral, graded components of the certificate's coursework rather than supplemental convenings, and attendance at both is required to complete the program and earn the certificate. Dates are published at the point of admission so that students can plan around professional commitments. These in-person sessions offer meaningful opportunities for face-to-face connection, teamwork, and networking across cohorts and fields.

More broadly, although this certificate is distinct in content and delivery from the Climate School's existing Advanced Certificate in Climate and Disaster Management, it does not differ in academic standards and rigor. Both consist of graduate-level courses approved by the same Committee on Instruction, with the same credit-hour requirements and grading standards.

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

Within the 30 weeks of the program, there will be 2 weeks of in-person sessions (including one-week intensives at both the beginning and end of the program) equaling approximately 10% of the total program. The remaining 90% of the program will be offered online.

Regardless of modality, the program meets the same instructional-hour requirement as on-campus coursework: 15 hours of instruction and 30 hours of out-of-class work per credit, or 225 instructional and 450 out-of-class hours across the certificate. These are delivered through weekly synchronous sessions, asynchronous instruction in Courseworks, and the two required in-person intensives. Each syllabus specifies the hours allocated to each mode, and the program director reviews them each term.

C) Please describe:

a. The on-line platform you will be using to teach this program;

All instruction is delivered through University-approved, CUIT-administered systems: Courseworks, Columbia's instance of the Canvas learning management system, for course materials, assignments, discussion, and grading; and Columbia Zoom for synchronous class sessions and office hours. No third-party platforms are used for instruction or student records. Both are accessed exclusively through Columbia single sign-on, requiring a Columbia University ID (UNI) and password with multi-factor authentication through Duo Security, and both fall under the University's existing accessibility, data security, and records retention standards.

b. Student support resources that will be available to the on-line students;

Students will have access to the same student services as on-campus Climate School students, delivered remotely. In addition to receiving all the standard support from the Climate School Academic Affairs team as in person students, students in this program will be supported by a single point of contact, Ashley Curtis, Assistant Director of Open Enrollment Programs at the Climate School. She will manage onboarding, monitor student progress across both terms, answer questions directly, and refer students to the appropriate University office when a need falls outside the program.

Additional support includes:

- Academic advising from the program director, with virtual faculty office hours in every course.
- Administrative and career services through Climate School student affairs staff and central University offices, all accessible remotely.
- Technical support from CUIT for UNI, Duo, and Zoom, and Courseworks support for the learning management system, with a technology orientation before the first week of classes.
- Office of Disability Services (ODS) registration through the same process used by on-campus students, with accommodations applying to both online and in-person components and course materials developed to Columbia's digital accessibility standards.
- Orientation and cohort engagement, including a virtual orientation before the fall term, the opening in-person intensive as extended onboarding, and moderated discussion forums throughout both terms.

c. How you will authenticate the identity of the on-line students in the program.

Identity is verified at admission and maintained throughout enrollment through standard Columbia procedures, including through Student Finance Services (SFS) verification. At admission, applicant identity is confirmed through review of official transcripts, a government-issued photo identification, and letters of recommendation from named referees.

Enrolled students are issued a UNI and a Columbia University ID card. All access to Courseworks, Columbia Zoom, and University systems is authenticated through Columbia's central authentication service (CAS) using the UNI and password with Duo multi-factor authentication. Credentials are individual and non-transferable, and misuse is subject to Columbia's Acceptable Usage of Information Resources policy and the Climate School's academic integrity standards.

The program's design reinforces this: synchronous sessions are conducted by video in small cohorts where faculty interact with students directly and repeatedly, and the two one-week intensives bring every student to campus, where identity is confirmed against their University ID.

8) Finances

The budgets provided in this section are for the Advanced Certificate only, which include the certificate expenses, revenues, and profit.

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.*

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.

The program will follow the Climate School's standard evaluation procedures. Because it is the School's first standalone online certificate, it will also apply a more intensive evaluation cadence in its initial years, scaling back once the model is established. Evaluation includes:

- **Mid-semester course evaluations**, shared with instructors while the term is in progress so adjustments can be made immediately.
- **End-of-semester course evaluations** on the School's standard instrument, with added items on online delivery, engagement, and technology.
- **Faculty debriefs** with the program director at the close of each course.
- **Student feedback sessions** with the program director each term, plus informal check-ins through the program's single point of contact.
- **Exit and alumni surveys**, emphasizing career outcomes and applied use of the content.
- **Annual program review** by the program director, the Climate School's Committee on Instruction (COI), and the dean, with a full review at the end of year one.

June 2026

Content is maintained on two cycles. Fast-moving material — regulatory developments, recent disaster cases, risk and insurance market conditions, and data sources used in the Applied Learning sequence — is refreshed each term by the instructor of record. Core frameworks, learning objectives, and assessment design are reviewed annually, with substantive changes going through the COI. Achievable improvements are implemented in real time as results come in; larger changes are sequenced against resource requirements and the academic calendar. This work is supported by existing staff: the program director, the Assistant Director of Open Enrollment Programs, and the Academic Affairs team.

B) Include a learning outcomes and assessment plan for the proposed program, using the below template. Examples here: http://academicprograms.columbia.edu/assessment-student-learning)

Program Goals for Student Learning	**Assessment of Learning Outcomes**
Goal 1: Evaluate disaster management programs and organizational practices	Direct: Coursework (graded assignments, examinations, and team projects completed online and during the in-person intensives); Applied Learning deliverables. Indirect: end-of-program exit survey, alumni survey.
Goal 2: Design effective disaster response and business recovery strategies	Direct: Coursework (graded assignments, examinations, and team projects completed online and during the in-person intensives); Applied Learning deliverables. Indirect: end-of-program exit survey, alumni survey.
Goal 3: Analyze quantitative and qualitative data in relation to disaster preparedness, response, recovery and long-term resiliency	Direct: Coursework (graded assignments, examinations, and team projects completed online and during the in-person intensives); Applied Learning deliverables. Indirect: end-of-program exit survey, alumni survey.
Goal 4: Develop technical competency in tools used for disaster management	Direct: Coursework (graded assignments, examinations, and team projects completed online and during the in-person intensives); Applied Learning deliverables. Indirect: end-of-program exit survey, alumni survey.
Goal 5: Identify and apply disaster finance mechanisms to enhance resilience and recovery	Direct: Coursework (graded assignments, examinations, and team projects completed online and during the in-person intensives); Applied Learning deliverables. Indirect: end-of-program exit survey, alumni survey.
Goal 6: Influence the disaster risk management field to bridge climate science and disaster risk reduction	Indirect: Alumni surveys, employment outcomes

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

Not applicable.

Fall 2027: Dates TBD

CLMT NEW: Applied Learning Phase 1 — Risk Analysis

Advanced Certificate in Executive Leadership for Climate Disaster Management

Credits: 1.5

Format: Online, with one in-person session during the NYC opening intensive

Meeting Pattern: Four 3-hour online workshops (approximately monthly), plus asynchronous modules and individual advising between workshops. *Specific days and times TBD.*

Instructor: Ashley Curtis

Teaching Assistant: *TBD*

Location: *Zoom; in-person session location TBD*

Office Hours: *TBD, plus individual advising appointments by request*

Prerequisites: None. Corequisite: CLMT 5010 Climate Change and Disaster Management and CLMT NEW Data-Driven Resilience amidst Uncertainty.

Italicized text throughout this draft indicates content to be added or confirmed.

COURSE DESCRIPTION

Applied Learning Phase 1 is the first half of the certificate's culminating project. Over the course of the fall term, each student conducts a structured climate risk analysis for a defined initiative inside a real client organization — typically their own employer, or an external organization identified and agreed upon at admission. The analysis establishes the evidentiary baseline that Phase 2 converts into an operational Resilience Initiative in the spring.

The unit of analysis is a project, not an enterprise. Students are not writing an organization-wide climate risk assessment; they are analyzing the climate exposure of a specific initiative — a facility, a product line, a program, a supply route, a capital project, a service delivery function — that sits inside a larger organization with its own existing risk, continuity, finance, legal, and procurement functions. Much of the intellectual work of Phase 1 is drawing that boundary correctly: establishing what the project owns, what it inherits from the enterprise, and where the two touch.

This framing is a constraint, not a simplification. A project-level analyst has to work with enterprise assumptions they did not set and cannot change, has to avoid duplicating assessments other functions have already done, and has to produce findings that a corporate risk officer will recognize as compatible with their own. Scoping too broadly produces a document no one owns; scoping too narrowly produces one no one can act on.

Students work individually on their own client engagement, but the course is run as a workshop. Cohort sessions are built around structured peer critique, in which students present work in progress to colleagues drawn from other sectors and receive feedback on both the analysis and its executive framing. This design is deliberate: risk analysis that cannot survive questioning from an informed outsider will not survive a board meeting.

The course is organized around a repeating cycle. Asynchronous modules introduce a method or data source; students apply it to their own client context; the monthly workshop is spent critiquing the resulting work rather than lecturing. A skills self-assessment at the start of the term identifies individual gaps and directs students to targeted resources and consultations, including sessions with Columbia Libraries data research services.

Additional detail on client agreements, deliverable expectations, and escalation procedures when a client relationship changes mid-term is provided in the program handbook.

COURSE GOALS

By the end of Phase 1, students will be able to:

- **Scope a climate risk question at the project level** that is analytically tractable within a single term and consequential to the client organization, and document that scope — including its boundary with enterprise-level functions — in a project charter agreed to by the client.
- **Locate the project within the organization's existing risk architecture** by identifying what assessments, registers, continuity arrangements, insurance coverage, and compliance obligations already apply, who owns them, and what the project is therefore not required to rebuild.
- **Assemble and interrogate hazard, exposure, and vulnerability data** from public and proprietary sources, including the U.S. Natural Hazards Index, the FEMA National Risk Index, and CliF-VI, with explicit attention to resolution, currency, and fitness for purpose at the scale the project actually operates.
- **Translate hazard exposure into project-level consequence** by mapping the initiative's critical dependencies, interdependencies with enterprise functions, and single points of failure against identified hazards — distinguishing consequences the project absorbs from those it transmits upward.
- **Characterize and communicate uncertainty** honestly, distinguishing what the analysis supports from what it does not, and resisting the pressure toward false precision that executive audiences often create.
- **Manage a client relationship** in which the student is also an employee or colleague, including negotiating scope with a project client, engaging function owners who did not ask to be involved, and handling findings the client may not want.
- **Give and receive substantive professional critique** across sectors and disciplines.

These goals map to Program Goals 1, 3, and 4 in the certificate's learning outcomes and assessment plan.

STRUCTURE

The course runs on a monthly workshop cadence across the 15-week fall term. Four 3-hour online workshops anchor the term. Between workshops, students complete asynchronous modules, advance

their client project, and meet individually with the instructor at least once. Students should expect to spend substantial time outside of scheduled sessions on client meetings, data gathering, and writing. The 1.5-credit designation reflects total student learning time, including scheduled sessions, asynchronous modules, client engagement, and independent work. Students should plan for approximately 4–5 hours per week across the term.

The course opens during the program's in-person intensive in New York City, where students confirm their client, present their initial scoping, and meet the cohort face to face before shifting to the online cadence.

Exact placement within the intensive week, and how this session coordinates with the other courses meeting during that week, to be confirmed.

Client interaction frequency is set by the student and the client, but students are expected to hold a minimum of three substantive client meetings during the term: scoping, mid-term check-in, and findings review. Because the project sits inside a larger organization, students are additionally expected to interview at least two function owners outside the project team — for example, the person responsible for business continuity, risk, insurance, or procurement — and to document what those conversations revealed about existing coverage and unstated assumptions.

COURSE REQUIREMENTS

Students will produce the following:

- **Project Charter (15%):** A short document, agreed to by the project client, defining the initiative under analysis, the unit of analysis, the scope boundary between the project and enterprise-level functions, the intended deliverable, and the schedule. A draft is workshopped in Week 4; the final version is due in Week 7. The charter is expected to be a living document, and material revisions should be discussed with the instructor as they occur.
- **Organizational Baseline and Function Map (10%):** A map of the enterprise functions whose existing work bears on the project — risk management, business continuity, finance and treasury, legal and compliance, procurement, facilities, IT, workforce — identifying for each the owner, what already exists, what the project can rely on, and where a gap or conflict sits. This is the document that prevents the rest of the term from duplicating work the organization has already done.
- **Hazard and Exposure Memo (15%):** A structured memo documenting the hazards relevant to the project's assets, operations, dependencies, or service population; the data sources used; and an explicit assessment of each source's limitations, including whether its spatial and temporal resolution is adequate at project scale. Emphasis is on defensible sourcing rather than volume.
- **Workshop Participation and Peer Critique (10%):** Assessed on the quality of critique offered to peers, not attendance alone. Students are assigned to standing triads and are responsible for reviewing their peers' work before each workshop.

- **Interim Briefing (15%):** A 10-minute briefing to the cohort covering scope, method, preliminary findings, and open questions, followed by questions. The briefing is a proof of concept, not a finished product; identifying what is not yet working is part of the assignment.
- **Risk Analysis Report (35%):** The term deliverable — a concise, client-ready analysis of the project's climate risk exposure, not an academic paper. It should state findings, document method, characterize uncertainty, locate the findings against what enterprise functions already hold, and identify the resilience questions that Phase 2 will address. The client should be engaged in approving the outline before drafting.

Page limits, formatting requirements, and the rubric for each deliverable to be added.

Grading of the Risk Analysis Report will take into consideration a self-assessment completed by the student and feedback solicited by the instructor from the client. Client feedback informs but does not determine the grade; a report that delivers unwelcome findings competently is not penalized.

COURSE SCHEDULE

Week	Format	Topic & In-Session Activities	Due / Milestone
Week 1 *Dates TBD*	**In-person** *NYC intensive*	**Program Opening Intensive** Course orientation and introduction to the Resilience Initiative arc across Phases 1 and 2. Client and candidate project confirmed; initial scoping conversations on where the project boundary sits. Cohort introductions and peer critique norms established. *Session count, sequencing, and integration with the other Fall course held during the intensive to be confirmed.*	Client & Project Confirmation
Weeks 2–3	Asynchronous	**Framing the Problem at Project Scale** Modules on scoping a project-level risk question inside a larger organization; distinguishing hazard, exposure, vulnerability, and consequence; drawing the boundary between project and enterprise. Reading and short discussion board post. *Readings TBD.*	Discussion post
Week 4 *Date TBD*	**Workshop 1** 3 hours, online	**Scoping and the Project Charter** Defining the unit of analysis (facility, product line, program, supply route, capital project). Deciding what the project owns versus inherits. Negotiating scope with a client who is also your employer. Structured peer critique of draft charters. *Guest practitioner TBD.*	**Draft Project Charter**
Weeks 5–7	Asynchronous	**Mapping the Enterprise Around the Project** Identifying which functions already hold relevant ground — risk, continuity, treasury, legal, compliance,	**Project Charter (final)** **Function Map**

Week	Format	Topic & In-Session Activities	Due / Milestone
		procurement, facilities, IT, workforce. Structured interview protocol for function owners. What existing registers, plans, and coverage mean for project scope. *Interview protocol and function map template to be developed.*	
Week 8 *Date TBD*	**Workshop 2** 3 hours, online	**Baseline Clinic** Peer critique of function maps. Where students found duplication, gaps, conflicting assumptions, or functions that declined to engage. Working through what to do when the enterprise baseline is undocumented or unavailable.	**Organizational Baseline**
Weeks 9–11	Asynchronous	**Hazard, Exposure, and Consequence** Guided practice with public hazard and exposure datasets, including the U.S. Natural Hazards Index, the FEMA National Risk Index, NOAA/NCEI billion-dollar disaster records, and CliF-VI, applied at project scale. Translating hazard into project-level consequence: dependencies, single points of failure, and what the project transmits to the enterprise. Library research consultation; individual advising. *Tool list to be finalized; international equivalents needed for students working outside the U.S.*	**Hazard & Exposure Memo** Advising meeting
Week 12 *Date TBD*	**Workshop 3** 3 hours, online	**Interim Briefings** Each student delivers a 10-minute interim briefing to the cohort covering scope, method, preliminary findings, and open questions. Structured peer critique and instructor feedback.	**Interim Briefing**
Weeks 13–14	Asynchronous	**Synthesis and Communication** Writing risk findings for an executive audience that includes function owners outside the project team. Visualizing uncertainty without overstating precision. Optional draft review.	Optional draft
Week 15 *Date TBD*	**Workshop 4** 3 hours, online	**Handoff to Phase 2** Report debrief, client feedback loop, and identification of the resilience questions each student carries into Phase 2 — including which enterprise functions the Phase 2 work will have to engage. Reflection on skills gained against the self-assessment completed in Week 1.	**Risk Analysis Report** *Due date TBD*

Calendar dates, University holidays, and alignment with the academic calendar to be added once the Fall 2027 schedule is set.

Assessment and Grading Policy

Grading

A+ Reserved for highly exceptional achievement

A Excellent. Outstanding achievement

A- Excellent work, close to outstanding

B+ Very good. Solid achievement expected of most graduate students.

B Good. Acceptable achievement.

B- Acceptable achievement, but below what is generally expected of graduate students.

C+ Fair achievement, above minimally acceptable level.

C Fair achievement, but only minimally acceptable.

C- Very low performance.

F Failure. Course usually may not be repeated unless it is a required course.

COLUMBIA CLIMATE SCHOOL POLICIES

Inclusive Excellence

The Climate School aims to advance knowledge and educate leaders for equitable solutions to climate and sustainability challenges. Using an interdisciplinary approach, the School encourages engagement of diverse perspectives on climate variability and its impacts. The classroom should be a welcoming environment where a variety of perspectives and lived experiences enable us to collaboratively define challenges and identify solutions.

The Climate School has adopted the Inclusive Excellence framework, which helps to build institutional capacity and effectiveness in promoting equal access, belonging, and success throughout our community. The Office of Inclusive Excellence supports student access, success, education, and scholarship.

Should you wish to discuss the School's environment or your engagement inside or outside of the classroom, please do not hesitate to contact Willie Williams (Assistant Dean for Inclusive Excellence) at 332.277.3697 or wwilliams@climate.columbia.edu.

Commitment to Student and Community Engagement

A focus on our climate challenges necessitates global understanding and action. Providing leaders with this competence requires curriculum and commitment. At the Climate School there is an expectation to embrace different worldviews and backgrounds while collaborating to critically redefine and solve problems. Instructors have designed classrooms to be welcoming environments where various perspectives and lived experiences are valued additions to the curriculum. This pedagogical approach provides opportunities for students to gain awareness of and appreciation for the multitude of cultures in and beyond the classroom. The Climate School supports the development of our world's changemakers. We are committed to the education of our students, the advancement of foundational

knowledge as well as new research and continued service to the community. In pursuit of these values, we unwaveringly support the participation of all students in meaningful and relevant learning.

Names/Pronouns

You deserve to be addressed in a manner that reflects your identity. Please see https://universitylife.columbia.edu/pronouns for more information on university policies and services.

Religious Observance

It is the policy of the Columbia Climate School to respect its members' observance of their major religious holidays. Students should notify instructors at the beginning of the semester about their wishes to observe holidays on days when class sessions are scheduled. Where academic scheduling conflicts prove unavoidable, no student will be penalized for absence due to religious reasons, and alternative solutions will be identified.

Student Wellness Message

Mental and physical health is important while undergoing graduate studies. While maintaining good health is a priority, occasional stress is an unavoidable part of a graduate education. Please know that there are resources on campus to help you cope with the pressures of student life. These include support groups and workshops on managing stress, healthy eating and life management. For resources for coping with stress, anxiety, and other specific health related concerns, please visit Columbia Health (https://www.health.columbia.edu/).

Accessibility

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process.

In order to receive disability-related academic accommodations, students must first be registered with the Office of Disability Services (ODS). More information on the ODS registration process is available online at www.health.columbia.edu/ods. Please allow for at least two weeks to complete the ODS registration process. Students are encouraged to contact ODS at the start of the semester.

Students who have, or think they may have, a disability are invited to contact ODS for a confidential discussion at 212.854.2388 (V) 212.854.2378 (TTY), or by email at disability@columbia.edu. If you have already registered with ODS and would like your professor(s) notified of your recommended accommodations, contact Natalie Unwin-Kuruneri (natalie@climate.columbia.edu) who serves as the ODS liaison to the Climate School.

Academic Integrity

The Columbia Climate School holds each member of its community responsible for understanding and abiding by the Academic Integrity and Community Standards. Ignorance of policies and standards concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

Students should be aware that academic dishonesty (for example, plagiarism, cheating on an examination, or dishonesty in dealing with a faculty member or other university official) are particularly serious offenses and will be dealt with severely under Dean's Discipline. It is essential to the academic integrity and vitality of this community that graduate students do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is expected of all students at all times.

Use of Artificial Intelligence (AI) is also subject to these integrity standards and must never be employed for a use that would be considered plagiarism if that material were sourced from a human author. For example, submitting work under your name that you did not personally write is not allowed, regardless of whether it was written by another author or by an AI tool. Individual faculty may have different policies on other ways students may use or not use AI in a particular class. **Students should assume all use of AI is forbidden unless told otherwise.**

Course-specific AI policy to be inserted here. Because students are producing analysis for a live client organization, this course will need an explicit statement on permitted use of AI tools for drafting, data processing, and document review, along with a disclosure requirement.

Copyright Policy

Please note -- Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

ADDITIONAL RESOURCES

Columbia University Library

Columbia's extensive library system ranks in the top five academic libraries in the nation, with many of its services and resources available online: https://library.columbia.edu/.

Columbia Writing Center

The Columbia Writing Center aids undergraduate and graduate students with writing consultations for specific writing projects, writing productivity sessions, and workshops. The Writing Center offers these services for free to current Columbia students. Read more about their services on their website. You can also contact the center at writingcenter@columbia.edu with questions.

Spring 2028: Dates TBD

CLMT NEW: Applied Learning Phase 2 — Resilience Planning

Advanced Certificate in Executive Leadership for Climate Disaster Management

Credits: 1.5

Format: Online, with final briefings delivered during the NYC closing intensive

Meeting Pattern: Four 3-hour online workshops (approximately monthly), plus asynchronous modules and individual advising between workshops. *Specific days and times TBD.*

Instructor: Ashley Curtis

Teaching Assistant: *TBD*

Location: *Zoom; in-person session location TBD*

Office Hours: *TBD, plus individual advising appointments by request*

Prerequisite: CLMT NEW Applied Learning Phase 1 — Risk Analysis. Corequisite: CLMT NEW Building Resilience to Minimize Disruption and Facilitate Recovery and CLMT NEW Disaster Finance.

Italicized text throughout this draft indicates content to be added or confirmed.

COURSE DESCRIPTION

Applied Learning Phase 2 completes the certificate's culminating project. Students take the project-level risk analysis produced in Phase 1 and convert it into an operational Resilience Initiative: a set of recommended interventions for their initiative, assessed for how they interact with the enterprise functions around them, and sequenced into something the client organization can act on.

The distinction between the two phases is the distinction between knowing and doing. Phase 1 asks what the project is exposed to. Phase 2 asks what should be done about it, what that will cost, who has to agree, and what happens if nothing is done. Students are expected to produce recommendations specific enough to be argued about — not a survey of options, but a position.

Because the initiative sits inside a larger organization, the spring deliverables are impact assessments rather than standalone plans. Students are not writing their company's continuity plan; they are determining what their project's climate risk means for continuity — what the project requires from existing continuity arrangements, what it must absorb itself, what it changes about recovery assumptions elsewhere, and what it hands upward. The same logic applies to finance, to legal and compliance, to procurement, and to the other functions the project touches. A project manager who arrives at the enterprise risk committee with a parallel plan will be ignored; one who arrives with a clear statement of what the project needs from each function, and what it will give back, will be heard.

This is the harder version of the assignment. Writing a plan from scratch is a drafting exercise. Determining how a proposed change propagates through an organization you do not control requires knowing who owns what, what they have already committed to, and what they will resist.

As in Phase 1, students work individually with their own client while the cohort operates as a workshop. Peer critique intensifies in the spring: students stress test one another's continuity assumptions against

real hazard profiles and question one another's financial cases as a skeptical investment committee would. The term ends with a public briefing during the New York City closing intensive and a separate, more technical briefing delivered to the client.

Additional detail on the Resilience Initiative format, client deliverable standards, and handling of confidential organizational information is provided in the program handbook.

COURSE GOALS

By the end of Phase 2, students will be able to:

- **Assess continuity implications of a project** within an existing enterprise continuity posture: what the project requires from established recovery arrangements, what it must absorb independently, which enterprise recovery time objectives its climate exposure invalidates, and what it escalates upward.
- **Determine the financing pathway for a project-level intervention**, identifying which costs sit in the project budget, which require capital allocation, which alter the organization's existing insurance or risk transfer position, and which external funding or cost-share mechanisms apply.
- **Trace cross-functional impacts** of a proposed intervention through legal and compliance, procurement and contracting, workforce, IT, facilities, and communications — stating for each function what is being asked of it and what it receives in return.
- **Build and defend an avoided-loss case** sized to the project rather than the enterprise, making assumptions explicit and testing the case against challenge.
- **Prioritize and sequence interventions** under realistic constraints of budget, authority, and organizational appetite, distinguishing what the project can decide from what it can only request.
- **Deliver executive-level briefings** to both general and technical audiences, and handle skeptical or resistant questioning from decision-makers and function owners.
- **Position recommendations for adoption** after the engagement ends, including identifying internal clients, governance entry points, decision gates, and the conditions under which the analysis should be revisited.

These goals map to Program Goals 2, 5, and 6 in the certificate's learning outcomes and assessment plan.

STRUCTURE

The course runs on the same monthly workshop cadence established in Phase 1: four 3-hour online workshops across the 15-week spring term, with asynchronous modules, client work, and individual advising in between. Standing peer triads carry over from the fall, so critique partners already know the client context and can go deeper faster. The 1.5-credit designation reflects total student learning time, including scheduled sessions, asynchronous modules, client engagement, and independent work. Students should plan for approximately 4–5 hours per week across the term.

Phase 2 is deliberately sequenced against the two 3-credit courses students take concurrently. Continuity content follows the corresponding material in Building Resilience to Minimize Disruption and Facilitate Recovery; the financing module follows Disaster Finance. The applied course does not re-teach that material — it is where students apply it at project scale inside a live organization, which is a different problem from applying it in the abstract.

Students should expect that some function owners will be unavailable, uninterested, or unwilling to share what the project needs. This is a normal condition of working inside a large organization and is treated as part of the assignment rather than an obstacle to it; documenting an unavailable baseline and proceeding on stated assumptions is an acceptable and often realistic outcome.

Sequencing across the three spring courses to be confirmed with the respective instructors so that applied deliverables do not precede the conceptual material they depend on.

The term concludes at the New York City closing intensive with public final briefings. The separate client briefing is scheduled by the student and client and may occur before or after the intensive.

Intensive dates, format, audience, and client attendance expectations to be confirmed.

COURSE REQUIREMENTS

Students will produce the following:

- **Bridge Memo (5%):** A short memo opening the term that reconfirms project client, reports any change in organizational circumstances since the fall, and states the specific resilience question Phase 2 will answer. Where a client, project, or client relationship has changed materially over the intersession, this memo documents the adjustment.
- **Continuity Impact Assessment (20%):** An assessment of what the project's climate exposure means for continuity of operations — the project's own and the organization's. It should state which existing continuity arrangements the project depends on, which of their assumptions the Phase 1 hazard findings call into question, what recovery capability the project must provide for itself, what it escalates to enterprise continuity, and what it would need from that function in a disruption. Assessed on operational specificity and on whether a continuity manager reading it would recognize their own environment.
- **Project Finance and Risk Transfer Memo (15%):** A memo establishing how the recommended intervention gets paid for: which costs sit within the project budget, which require capital allocation or a business case beyond it, how the project's exposure sits against existing corporate insurance and risk transfer arrangements, and which external mechanisms — public cost-share, grant, parametric, or resilience-linked instruments — are realistically available. Includes an avoided-loss case sized to the project, with assumptions stated explicitly.
- **Cross-Functional Impact Map (10%):** A structured assessment of what the intervention asks of each function it touches — legal and compliance, procurement and contracting, workforce, IT, facilities, communications, and any sector-specific function. For each: the ask, the owner, the likely objection, and what the function gets in return. Built directly on the Phase 1 function map.

- **Workshop Participation and Peer Critique (10%):** Assessed on the quality of critique offered, including preparation for the stress-testing and investment-committee exercises, which require reading a peer's full deliverable in advance.
- **Briefings (15%):** Two briefings are required.
    - **Final Briefing (10%):** A 10–15 minute public briefing delivered at the closing intensive to an audience of faculty, clients, and invited practitioners. Covers the risk finding, the recommended approach, and the case for action.
    - **Client Briefing (5%):** A longer and more technical briefing, approximately 30 minutes, delivered to the client organization and ideally to the function owners the project depends on. Goes deeper on method, assumptions, cost, and implementation sequence. Scheduled by mutual availability.
- **Resilience Initiative (25%):** The culminating deliverable, integrating the Phase 1 analysis, the continuity and cross-functional impact assessments, the finance pathway, and a prioritized implementation sequence into a single document written for the decision-makers who can actually authorize it. It should be explicit about which recommendations the project can execute on its own authority and which require a decision elsewhere in the organization. The executive summary is weighted heavily: it is the part of the document that will actually be read.

Page limits, formatting requirements, the Resilience Initiative template, and the rubric for each deliverable to be added.

Grading of the Resilience Initiative will take into consideration a self-assessment completed by the student and feedback solicited by the instructor from the client. Client feedback informs but does not determine the grade; recommendations a client declines to adopt are not penalized where the analysis and case are sound.

COURSE SCHEDULE

Week	Format	Topic & In-Session Activities	Due / Milestone
Weeks 1–2	Asynchronous	**Re-entry and Re-scoping** Return to the Phase 1 report, function map, and open questions. Reconfirm project client and any changes in organizational priorities over the intersession. Modules on moving from risk finding to intervention design at project scale.	**Bridge Memo**
Week 3 *Date TBD*	**Workshop 1** 3 hours, online	**From Risk to Intervention** Prioritizing among candidate interventions under real budget and authority constraints. Distinguishing what the project can decide, what it must request, and what it can only advocate for. Peer critique of bridge memos in standing triads.	Intervention shortlist

Week	Format	Topic & In-Session Activities	Due / Milestone
Weeks 4–6	Asynchronous	**Continuity Interfaces** Reading an existing continuity posture and testing it against project-level hazard findings: which recovery time objectives hold, which dependencies were never mapped, what the project must provide for itself, and what it escalates. Structured interviews with the continuity owner identified in Phase 1. *Coordination with the concurrent Building Resilience course to avoid duplication and sequence content appropriately.*	**Continuity draft, Week 6**
Week 7 *Date TBD*	**Workshop 2** 3 hours, online	**Continuity Interface Clinic** Tabletop-style stress testing. Students run a peer's project against a disruption scenario built from that peer's own Phase 1 hazard profile, playing the role of enterprise continuity, and report where the handoffs fail. *Scenario materials to be developed.*	**Continuity Impact Assessment**
Weeks 8–10	Asynchronous	**Paying for It, and Who Else Is Affected** Where project costs sit: project budget, capital allocation, existing corporate insurance and risk transfer, external grant and cost-share programs, parametric and resilience-linked instruments. Building the avoided-loss argument at project scale. In parallel, tracing the intervention through legal, compliance, procurement, workforce, IT, and communications using the Phase 1 function map. *Sequenced to follow the corresponding material in the Disaster Finance course; alignment to be confirmed.*	**Cross-Functional Impact Map** Week 10
Week 11 *Date TBD*	**Workshop 3** 3 hours, online	**The Capital Case and the Function Owners** Students present the financial argument for their intervention and are questioned by peers acting as a skeptical investment committee. Assigned peers additionally play named function owners — procurement, legal, continuity — and raise the objections that function would actually raise. *Guest practitioner from risk finance or corporate treasury TBD.*	**Project Finance & Risk Transfer Memo**
Weeks 12–13	Asynchronous	**Assembly and Executive Framing** Integrating the Phase 1 analysis, continuity and cross-functional impact assessments, and finance pathway into a single Resilience Initiative. Separating what the project can authorize from what it must request. Executive summary writing. Optional full-draft review by the instructor.	Optional full draft

Week	Format	Topic & In-Session Activities	Due / Milestone
Week 14 *Date TBD*	**Workshop 4** 3 hours, online	**Briefing Rehearsal** Full run-through of client briefings with cohort critique. Handling hostile or skeptical questions; presenting recommendations that require another function to do something it did not plan to do.	**Resilience Initiative** *Due date TBD*
Week 15 *Dates TBD*	**In-person** *NYC closing intensive*	**Program Closing Intensive** Public final briefings before an audience of faculty, clients, and invited practitioners. Cohort debrief and reflection against the Phase 1 skills self-assessment. Discussion of carrying the Initiative into the organization's own governance process after the certificate ends. *Format, audience, client attendance expectations, and whether client briefings are delivered here or separately to be confirmed.*	**Final Briefing** **Client Briefing** *Scheduling TBD*

Calendar dates, University holidays, and alignment with the academic calendar to be added once the Spring 2028 schedule is set.

Assessment and Grading Policy

Grading

A+ Reserved for highly exceptional achievement

A Excellent. Outstanding achievement

A- Excellent work, close to outstanding

B+ Very good. Solid achievement expected of most graduate students.

B Good. Acceptable achievement.

B- Acceptable achievement, but below what is generally expected of graduate students.

C+ Fair achievement, above minimally acceptable level.

C Fair achievement, but only minimally acceptable.

C- Very low performance.

F Failure. Course usually may not be repeated unless it is a required course.

COLUMBIA CLIMATE SCHOOL POLICIES

Inclusive Excellence

The Climate School aims to advance knowledge and educate leaders for equitable solutions to climate and sustainability challenges. Using an interdisciplinary approach, the School encourages engagement of diverse perspectives on climate variability and its impacts. The classroom should be a welcoming environment where a variety of perspectives and lived experiences enable us to collaboratively define challenges and identify solutions.

The Climate School has adopted the Inclusive Excellence framework, which helps to build institutional capacity and effectiveness in promoting equal access, belonging, and success throughout our community. The Office of Inclusive Excellence supports student access, success, education, and scholarship.

Should you wish to discuss the School's environment or your engagement inside or outside of the classroom, please do not hesitate to contact Willie Williams (Assistant Dean for Inclusive Excellence) at 332.277.3697 or wwilliams@climate.columbia.edu.

Commitment to Student and Community Engagement

A focus on our climate challenges necessitates global understanding and action. Providing leaders with this competence requires curriculum and commitment. At the Climate School there is an expectation to embrace different worldviews and backgrounds while collaborating to critically redefine and solve problems. Instructors have designed classrooms to be welcoming environments where various perspectives and lived experiences are valued additions to the curriculum. This pedagogical approach provides opportunities for students to gain awareness of and appreciation for the multitude of cultures in and beyond the classroom. The Climate School supports the development of our world's changemakers. We are committed to the education of our students, the advancement of foundational knowledge as well as new research and continued service to the community. In pursuit of these values, we unwaveringly support the participation of all students in meaningful and relevant learning.

Names/Pronouns

You deserve to be addressed in a manner that reflects your identity. Please see https://universitylife.columbia.edu/pronouns for more information on university policies and services.

Religious Observance

It is the policy of the Columbia Climate School to respect its members' observance of their major religious holidays. Students should notify instructors at the beginning of the semester about their wishes to observe holidays on days when class sessions are scheduled. Where academic scheduling conflicts prove unavoidable, no student will be penalized for absence due to religious reasons, and alternative solutions will be identified.

Student Wellness Message

Mental and physical health is important while undergoing graduate studies. While maintaining good health is a priority, occasional stress is an unavoidable part of a graduate education. Please know that there are resources on campus to help you cope with the pressures of student life. These include support groups and workshops on managing stress, healthy eating and life management. For resources for coping with stress, anxiety, and other specific health related concerns, please visit Columbia Health (https://www.health.columbia.edu/).

Accessibility

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process.

In order to receive disability-related academic accommodations, students must first be registered with the Office of Disability Services (ODS). More information on the ODS registration process is available online at www.health.columbia.edu/ods. Please allow for at least two weeks to complete the ODS registration process. Students are encouraged to contact ODS at the start of the semester.

Students who have, or think they may have, a disability are invited to contact ODS for a confidential discussion at 212.854.2388 (V) 212.854.2378 (TTY), or by email at disability@columbia.edu. If you have already registered with ODS and would like your professor(s) notified of your recommended accommodations, contact Natalie Unwin-Kuruneri (natalie@climate.columbia.edu) who serves as the ODS liaison to the Climate School.

Academic Integrity

The Columbia Climate School holds each member of its community responsible for understanding and abiding by the Academic Integrity and Community Standards. Ignorance of policies and standards concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

Students should be aware that academic dishonesty (for example, plagiarism, cheating on an examination, or dishonesty in dealing with a faculty member or other university official) are particularly serious offenses and will be dealt with severely under Dean's Discipline. It is essential to the academic integrity and vitality of this community that graduate students do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is expected of all students at all times.

Use of Artificial Intelligence (AI) is also subject to these integrity standards and must never be employed for a use that would be considered plagiarism if that material were sourced from a human author. For example, submitting work under your name that you did not personally write is not allowed, regardless of whether it was written by another author or by an AI tool. Individual faculty may have different policies on other ways students may use or not use AI in a particular class. **Students should assume all use of AI is forbidden unless told otherwise.**

Course-specific AI policy to be inserted here. Because students are producing analysis for a live client organization, this course will need an explicit statement on permitted use of AI tools for drafting, data processing, and document review, along with a disclosure requirement.

Copyright Policy

Please note -- Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries

and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

ADDITIONAL RESOURCES

Columbia University Library

Columbia's extensive library system ranks in the top five academic libraries in the nation, with many of its services and resources available online: https://library.columbia.edu/.

Columbia Writing Center

The Columbia Writing Center aids undergraduate and graduate students with writing consultations for specific writing projects, writing productivity sessions, and workshops. The Writing Center offers these services for free to current Columbia students. Read more about their services on their website. You can also contact the center at writingcenter@columbia.edu with questions.

Spring 2027

CLMT [TBD]: Climate Adaptation and Disaster Finance

3 Credits · [TBD Day/Time] · [TBD Location]

Columbia Climate School

Instructor: Jeff Schlegelmilch (js4645@columbia.edu)
Office Hours: By appointment — Hogan Hall, A-114
***Co-Instructor:** Miren Gill-Vernet Pagonbarraga (note: Allowance for co-instructor for first year to be determined with Academic Affairs. Course will proceed at a minimum with Lead Instructor)
Course Assistant: TBD

COURSE DESCRIPTION

Climate impacts and unsustainable development are leading to increasing impacts from disasters. As a result, the impacts of disasters are measured in increasing costs, as well as in the overall number of billion-dollar disasters. Paying for disasters requires accessing resources from government, private, and humanitarian sectors, with varying economic consequences in the short and long term based on pre-disaster resilience. Additionally, as climate disasters increase, new mechanisms for climate adaptation and disaster resilience financing are being developed and implemented.

This course provides an overview of how money flows before, during, and after disasters through readings, analyses, and case studies. Students will learn to quantify disaster risk using the core metrics that drive pricing and decision-making, and to assemble layered portfolios of financial instruments. Students then apply this knowledge in analyzing country-level disaster finance risk and opportunities, in developing novel approaches to climate adaptation and disaster financing through a group pitch, and in a capstone simulation that requires teams to manage the resilience finances of a city over time.

LEARNING OUTCOMES

At the conclusion of this course, students will be able to:

- Describe the multitude of pathways through which disasters are financed.
- Describe current and emerging financial instruments used to pay for disaster readiness, response, and recovery.
- Quantify and communicate disaster risk using core metrics, including average/expected annual loss (AAL), probable maximum loss (PML), and value at risk (VaR).
- Apply a risk-layering approach to combine retention and risk-transfer instruments for a jurisdiction.
- Analyze a country's financial readiness for disasters and provide recommendations for improvement.
- Develop frameworks for novel financial instruments designed to support disaster preparedness, response, and recovery.

- Evaluate the trade-offs and return on investment of resilience investment decisions under uncertainty over time.
- Discuss emerging financial instruments to support climate adaptation.

REQUIRED COURSE MATERIALS

There is no required textbook. Primary readings are listed in the course schedule below and will be provided by the instructor or available through Columbia Libraries.

CLASS ASSIGNMENTS, ACTIVITIES & ASSESSMENT

Your final grade is based on five components, each structured to support both collaborative and individual learning: participation, a country case-study abstract (midterm), a group financial-instrument pitch, a group city-resilience simulation, and a final country case-study paper.

Participation (15%)

Students are expected to participate regularly in class discussions and in discussions following group presentations. Students receive the full participation score for participating in ¾ or more of classes, 75% for more than ½ but less than ¾, 25% for more than ¼ but ½ or less, and no credit for participation in ¼ or fewer of classes. Participation is defined as asking a question or providing a comment during structured discussions.

Country Case Study Abstract — Midterm (10%)

Each student prepares a one-page abstract that lays out the structure for their final case study of a country's current financial exposure to disasters, including a high-level summary of initial findings on: the country; its current financial situation for disasters (baseline economy and vulnerability; government programs, domestic and international; private finance access; non-profit landscape); and the projected impacts of a major disaster.

Use 1-inch margins and 11- or 12-point font for the primary text (smaller font is acceptable for charts and footnotes). Citations should be in APA format as end-notes and do not count toward the one-page limit. Rubric:

- Clarity of the financial landscape for disaster resilience – 25%
- Identification of potential disruption scenarios and inclusion of impact models – 25%
- Integration of data and evidence – 25%
- Adherence to page limit; clarity of writing; free of typos; proper grammar – 25%

Group Project — Financial Instrument Pitch (25%)

Groups of 3–5 will develop a novel financial instrument for disaster management. This can be a single instrument (e.g., a catastrophe bond) or a financial "stack" of multiple instruments. Each group prepares a 5-minute "pitch" delivered to a board of mock investors made up of Columbia faculty and researchers as well as industry partners with investing experience. After each pitch, board members ask 2–3 questions, and the group responds. The board votes on a 1 (uninvestible) to 5 (investment ready) scale; this vote does not affect the grade. Rubric:

- Clarity of the proposed financial instrument – 20%

- Clarity of the use case and audiences for the proposed instrument – 20%
- Ability to address questions in real time – 20%
- Integration of data and evidence in support of the pitch – 20%
- Adherence to time and professionalism of the pitch – 20%

City Resilience Simulation — Group Capstone (15%)

In the final session, groups take on the management of a midsized city and make disaster-finance and resilience investment decisions across multiple five-year increments. As the simulation runs, teams confront evolving hazard scenarios and must balance budget constraints, risk retention and risk transfer, and competing priorities, while tracking the costs, return on investment, and resilience outcomes of their choices. Teams submit a brief decision log and reflection. Rubric:

- Quality and rationale of the investment strategy (risk-informed decision-making) – 25%
- Application of course frameworks (risk metrics, risk layering, instrument selection) – 25%
- Adaptation and management across the five-year increments under uncertainty – 20%
- Financial performance (ROI) and resilience outcomes achieved – 15%
- Teamwork, professionalism, and quality of the debrief/reflection – 15%

Country Case Study — Final Paper (35%)

Building on the midterm abstract, each student prepares an 8–10 page report on a country's financial exposure to disasters, with an analysis of strengths and weaknesses and recommendations for improvement. The report should be targeted to an audience of national leadership across executive or legislative functions — not to a single ministry, department, or program — and should include: the country; its current financial situation for disasters (baseline economy and vulnerability; government programs, domestic and international; private finance access; non-profit landscape; projected impacts of a major disaster); strengths and weaknesses; and recommendations for further resilience.

Use 1-inch margins and 11- or 12-point font for the primary text (smaller font is acceptable for charts and footnotes). Citations should be in APA format as end-notes and do not count toward the page limit. Rubric:

- Clarity of the financial landscape for disaster resilience – 20%
- Identification of risks and opportunities in the current state of financial readiness – 20%
- Identification of potential disruption scenarios and inclusion of impact models – 20%
- Integration of data and evidence in analyses and recommendations – 20%
- Adherence to page limit; clarity of writing; free of typos; proper grammar – 20%

ASSIGNMENT POLICIES

Late Assignment Policy: Please be attentive to due dates. Late work will lose 5 points per day. Extensions will be granted only in rare circumstances; please plan ahead to submit your work on time.

AI Policy: For all written work, you may use AI tools for grammar editing, citation management, and formatting assistance only. Please submit a brief AI disclosure with each assignment describing: (1) which AI tools you used; (2) what tasks AI performed; and (3) how you used those outputs in your final submission.

GRADING SCALE

A+ (100%) Rare performance. Reserved for highly exceptional achievement.
A (94–99) Excellent. Outstanding achievement.
A- (90–93) Excellent work.
B+ (87–89) Very good. Solid achievement expected of most graduate students.
B (84–86) Good. Acceptable achievement.
B- (80–83) Acceptable, but below what is generally expected of graduate students.
C+ (77–79) Fair achievement.
C (74–76) Fair, but only minimally acceptable.
C- (70–73) Very low performance.
F (<70) Failure. Course may not usually be repeated unless required.

COURSE SCHEDULE

The course runs across 14 weeks of class content within an approximately 16-week term. The schedule below fills in topics, activities, and readings for each week. Readings marked "provided" are shared by the instructor.

Week	Topics & Activities	Readings & Assignments
WEEK 1 **How We Pay for Disasters: Overview & Frameworks**	Course overview and syllabus walkthrough; how money flows before, during, and after disasters. Primer on: • The disaster cycle and the role of disaster finance within it • Disaster costs: trends and trajectories; players, stakeholders, and metrics • Climate adaptation finance: its role in disaster resilience; differences and overlap with climate mitigation	**Required:** • "Financing Catastrophe: Four Ways We Pay for Disasters," The Hill (2019) • GARI (2024). The Unavoidable Opportunity • CRA / Tailwind (2025). Adaptation Finance Primer (provided) **Optional:** • McKinsey Global Institute. Advancing adaptation: mapping costs from cooling to coastal defenses • UNEP (2024). Adaptation Gap Report 2024 — executive summary • Disaster cycle primer (PrepareCenter)
WEEK 2 **Economic Impacts from Disasters & Quantifying Risk (incl. Value at Risk)**	First half — the economic impacts of disasters: determinants and trends (direct vs. indirect losses, macro-fiscal effects, distributional impacts). Second half — how disaster risk is measured and priced, introducing the core metrics used throughout the course: • Average / expected annual loss (AAL) and probable maximum loss (PML) • Exceedance-probability (EP) curves • Value at Risk (VaR) and Tail-VaR — definitions, uses, and limits • How these metrics drive pricing, capital, and the logic of risk layering (retention vs. transfer)	**Required:** • Noy, I., & Yonson, R. (2018). Economic vulnerability and resilience to natural hazards: A survey. Sustainability, 10(8), 2850 • Recent journal article on the GDP impacts of climate-related disasters (provided) • Verisk. Modeling Fundamentals: Evaluating Risk Measures (AAL, PML, VaR, EP curves) • Rising J et al. (2026) The macroeconomic case for investing in climate adaptation. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. **Optional:** • Moody's Analytics. How Natural Disasters Affect U.S. GDP

Week	Topics & Activities	Readings & Assignments
		• NAIC (2025). Catastrophe Modeling Primer • World Bank / Financial Protection Forum (2025). Risk Layering Explained (DRF Analytics 101)
WEEK 3 **Government Funds, Part 1: Domestic / Sovereign (United States)**	U.S. sovereign disaster assistance. Key players and roles (legal, executive, state/local). Mechanisms of finance across mitigation, preparedness, response, and recovery: • Federal programs: Stafford Act declarations; FEMA Public and Individual Assistance; Hazard Mitigation Grant Program and BRIC; CDBG-DR; SBA disaster loans; the National Flood Insurance Program • State programs and local initiatives • Other partners	**Required:** • Congressional Research Service. Congressional Primer on Responding to and Recovering from Major Disasters and Emergencies (latest ed.) • FEMA. Overview of federal disaster assistance / Stafford Act **Optional:** • GAO. Disaster Relief Fund / federal disaster recovery report • CRS. Federal Disaster Assistance: The National Flood Insurance Program
WEEK 4 **Government Funds, Part 2: International & Regional Sovereign Mechanisms**	Sovereign disaster risk financing beyond the U.S. National examples and regional risk pools: • National examples: Brazil; China • Sovereign risk layering and contingent finance (reserve funds; contingent credit / Cat DDO) • Regional catastrophe risk pools: CCRIF SPC (Caribbean); African Risk Capacity (ARC); Pacific (PCRIC)	**Required:** • World Bank (2014). An Operational Framework for Disaster Risk Financing and Insurance • CCRIF SPC. Overview and parametric sovereign pooling (case) **Optional:** • World Bank (2024). How layering and pooling disaster risk across Central Asia can better protect livelihoods • World Bank. Disaster Risk Financing and Insurance (DRFI) Program
WEEK 5 **Government Funds, Part 3: International Humanitarian & Multilateral Assistance**	The international humanitarian financing architecture, key players, and mechanisms: • UN mechanisms: CERF, country-based pooled funds, flash appeals • Anticipatory action and forecast-based financing • Multilateral and bilateral official development assistance (ODA)	**Required:** • Global Facility for Disaster Reduction and Recovery (2018). Operational guidance for disaster risk financing (exec. summary & Part 1) • Clarke, D. J., & Dercon, S. (2016). Dull Disasters? How planning ahead will make a difference (Ch. 4: Insurance

Week	Topics & Activities	Readings & Assignments
	• Regional blocs and types of assistance	and other financial instruments) **Optional:** • UN OCHA. CERF and anticipatory action briefs • Centre for Disaster Protection. Reports on pre-arranged financing
WEEK 6 **Private Finance, Part 1: Insurance & Risk Transfer (Cat Bonds, ILS, Parametric)**	Private-sector players and risk-transfer mechanisms; connecting the risk-layering logic from Week 2 to market instruments: • Key players: banks, insurers and reinsurers, ILS investors, private equity • Mechanisms: insurance/reinsurance; catastrophe bonds and insurance-linked securities (ILS); parametric vs. indemnity triggers; emergency lending and loans • The protection gap and the limits of risk transfer	**Required:** • Cummins, J. D. (2008). CAT bonds and other risk-linked securities: State of the market and recent developments. Risk Mgmt. & Insurance Review, 11(1), 23–47 • Artemis (2026). Catastrophe Bond & ILS Market Report, Q1 2026 (provided) • Artemis (2026). Total catastrophe bond issuance hits $161bn YTD in 2026 (provided) • University of Cambridge Institute for Sustainability Leadership (CISL). (2026). The CliamteWise Insurability Readiness Matrix. Cambridge, UK: Cambridge Institute for Sustainability Leadership **Optional:** • Swiss Re (2025). Tackling the toxic loss-creep issue in European NatCat events (provided) • Fed Small Business Credit Survey (2022). The Impact of Natural Disasters on Small Businesses (provided) • FS — 16th Risk Assessment (provided): protection gap & financial-stability lens • Fathom (2026). How banks are exploring cat risk modeling.
WEEK 7 **Private Finance, Part 2: Concessional & Blended Finance**	Development banks and multilateral lending institutions; structures for crowding in private capital: • Concessional finance	**Required:** • OECD (2026). Review on Aligning Finance with Climate Goals (selected sections) (provided)

Week	Topics & Activities	Readings & Assignments
	• Blended finance structures: first-loss capital, guarantees, de-risking • Emerging trends in climate adaptation finance and the adaptation finance gap ***Midterm — Country Case Study Abstract due this week.***	• UNEP (2024). Adaptation Gap Report 2024 — finance chapter (the $187–359B/yr gap) **Optional:** • Hallegatte, Rentschler & Rozenberg (2019). Lifelines: The Resilient Infrastructure Opportunity (World Bank), Overview • Climate Policy Initiative. Global Landscape of Climate Finance (adaptation section) • Convergence. State of Blended Finance • (either the above or use this case to see it in practical terms) - Convergence Blended Finance (2026). Private Capital Mobilization in Ghana: The role of blended finance in advancing Ghana's resilient growth. Convergence Whitepaper.
WEEK 8 **Private Finance, Part 3: Investable Opportunities & the Adaptation Economy**	Where capital sees opportunity in adaptation and resilience: • Key players: investment banks, venture capital, growth equity, private equity • Investable opportunities: new technologies; new infusions of capital; accelerating spend in key sectors; de-risking investments; "wildcards" • The emerging "adaptation economy" as an investment thesis	**Required:** • RBC Capital Markets (2025). Innovation in adaptation: emerging solutions for a changing climate • The Hidden Adaptation Economy: A New View of Corporate Resilience and Opportunity (2026) (provided) • Investing in Resilience. Carlyle (2026) **Optional:** • CRA / Tailwind (2025). Adaptation Finance Primer — instruments map (provided) • GARI (2024). The Unavoidable Opportunity
WEEK 9 **Group Pitches (Shark Tank Style), Part 1**	In-class group pitches of novel financial instruments to the board of mock investors, followed by board questions and voting. ***No assigned readings — pitch sessions.***	—

Week	Topics & Activities	Readings & Assignments
WEEK 10 **Group Pitches (Shark Tank Style), Part 2**	In-class group pitches of novel financial instruments to the board of mock investors, followed by board questions and voting. ***No assigned readings — pitch sessions.***	—
WEEK 11 **Non-Profit, Philanthropic & Community Finance, Part 1**	Types and incentives of charitable and community capital across the disaster cycle: • Types: philanthropy; operating NGOs; blended models; community-based and mutual-aid finance; domestic vs. international; quasi-governmental actors • Key players and mechanisms of assistance • Strengths and limits of charitable capital	**Required:** • Center for Disaster Philanthropy & Candid. Measuring the State of Disaster Philanthropy (latest annual report) **Optional:** • Resilient Tourism Competitiveness in the Face of Disasters (provided): sector recovery & community resilience • Mental Health Integration Guide (2025) (provided): community recovery & wellbeing dimension
WEEK 12 **Non-Profit Finance, Part 2 — Guest Lecture: Greg Witkowski**	Philanthropy and civil society in disaster finance — history, incentives, and accountability, and the interface between philanthropic, public, and private capital. How philanthropic capital catalyzes and de-risks, and where it fills (or distorts) gaps left by markets and government; implications for designing financial instruments.	**Required:** • Guest-curated reading (to be confirmed with Prof. Witkowski) **Optional:** • Center for Disaster Philanthropy. Selected resources
WEEK 13 **Economic Impacts Revisited: Case Studies**	Applying the full toolkit to recent events. Jamaica — Hurricane Beryl (2024) and Hurricane Melissa (2025): the financing stack in action. • The 100% payout of the $150M World Bank-arranged parametric catastrophe bond after Hurricane Melissa • CCRIF SPC payouts and damages estimated at ~32% of Jamaica's 2024 GDP • Comparative cases and lessons for layered financial protection	**Required:** • World Bank (2025). Hurricane Melissa triggers 100% payout of $150M catastrophe bond for Jamaica • Moody's. Catastrophic events in an uncertain future: a pending $41 trillion bill for businesses and governments to resolve **Optional:** • Artemis (2026). Q1 2026 cat bond market report — Hurricane Melissa market impact (provided) • Resilient Tourism Competitiveness in the Face of Disasters (provided): Caribbean exposure

Week	Topics & Activities	Readings & Assignments
WEEK 14 **Capstone: City Resilience Simulation**	Applied synthesis capstone. Student teams "run a midsized city," making resilience and disaster-finance investment decisions in five-year increments and tracking impacts, costs, and return on investment under evolving disaster scenarios. Integrates risk metrics (AAL/PML/VaR), risk layering, and the full menu of sovereign, private, and philanthropic instruments studied during the term. A concluding debrief connects decisions to course themes and to professional pathways / next steps. ***City Resilience Simulation (graded). Final Country Case Study Paper due (per course calendar).***	**Required:** • Simulation briefing packet (instructor-provided) **Optional:** • World Bank / GFDRR. City resilience financing resources (e.g., CityStrength) • C40 Cities / ICLEI. Municipal resilience finance briefs

COLUMBIA CLIMATE SCHOOL POLICIES

Inclusive Excellence

The Climate School aims to advance knowledge and educate leaders for equitable solutions to climate and sustainability challenges. Using an interdisciplinary approach, the School encourages engagement of diverse perspectives on climate variability and its impacts. The classroom should be a welcoming environment where a variety of perspectives and lived experiences enable us to collaboratively define challenges and identify solutions. The Climate School has adopted the Inclusive Excellence framework, which helps build institutional capacity and effectiveness in promoting equal access, belonging, and success throughout our community. The Office of Inclusive Excellence supports student access, success, education, and scholarship. Should you wish to discuss the School's environment or your engagement inside or outside of the classroom, please do not hesitate to contact Willie Williams (Assistant Dean for Inclusive Excellence).

Names / Pronouns

You deserve to be addressed in a manner that reflects your identity, as described in university policies and services.

Religious Observance

It is the policy of the Columbia Climate School to respect its members' observance of their major religious holidays. Students should notify instructors at the beginning of the semester about their wishes to observe holidays on days when class sessions are scheduled. Where academic scheduling conflicts prove unavoidable, no student will be penalized for absence due to religious reasons, and alternative solutions will be identified.

Student Wellness Message

Mental and physical health is important while undergoing graduate studies. While maintaining good health is a priority, occasional stress is an unavoidable part of a graduate education. Please know that there are resources on campus to help you cope with the pressures of student life, including support groups and workshops on managing stress, healthy eating, and life management. For resources for coping with stress, anxiety, and other specific health-related concerns, please visit Columbia Health.

Accessibility

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. In order to receive disability-related academic accommodations, students must first be registered with the Office of Disability Services (ODS). Please allow at least two weeks to complete the ODS registration process, and contact ODS at the start of the semester. Students who have, or think they may have, a disability are invited to contact ODS for a confidential discussion at 212.854.2388 (V), 212.854.2378 (TTY), or disability@columbia.edu. If you have already registered with ODS and would like your professor(s) notified of your recommended accommodations, contact Natalie Unwin-Kuruneri, the ODS liaison to the Climate School.

Academic Integrity

The Columbia Climate School holds each member of its community responsible for understanding and abiding by the Academic Integrity and Community Standards. Ignorance of policies and standards concerning academic dishonesty shall not be a defense in any disciplinary proceedings. Academic dishonesty (for example, plagiarism, cheating on an examination, or dishonesty in dealing with a faculty member or other university official) is a particularly serious offense and will be dealt with severely under Dean's Discipline. It is essential to the academic integrity and vitality of this community that graduate students do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Use of Artificial Intelligence (AI) is also subject to these integrity standards and must never be employed for a use that would be considered plagiarism if that material were sourced from a human author. Submitting work under your name that you did not personally write is not allowed, regardless of whether it was written by another author or by an AI tool. Use of AI for spelling, grammar, and/or translation is allowed but must be disclosed in any submitted assignments.

Copyright Policy

Due to copyright restrictions, online access to course material is limited to instructors and students currently registered for this course. The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One specified condition is that the photocopy or reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of fair use, that user may be liable for copyright infringement.

ADDITIONAL RESOURCES

Columbia University Libraries. Columbia's extensive library system ranks among the top academic libraries in the nation, with many services and resources available online.

Columbia Writing Center. The Writing Center aids undergraduate and graduate students with writing consultations, productivity sessions, and workshops, free to current Columbia students.

University Senate

Proposed: November 13, 2026

Adopted: November 13, 2026

64-0-0: In favor-opposed-abstained

RESOLUTION TO APPROVE AN ACADEMIC PROGRAM LEADING TO THE ADVANCED CERTIFICATE IN CLIMATE AND ENERGY SOLUTIONS (Embedded) (Climate School)

WHEREAS addressing climate change requires transforming the ways we produce and use energy, and there is a need for professionals who can support the ongoing efforts of New York City and New York State to lead in climate and energy innovation across the public, nonprofit, and private sectors; and

WHEREAS Columbia Climate School students have requested coursework on sustainable energy solutions, as well as specialized academic paths; and

WHEREAS this embedded certificate, offered in collaboration with the School of Engineering and Applied Science, where students will take part of the certificate coursework, provides a technology-focused framework not offered elsewhere at the University; and

WHEREAS the program will require the completion of 24 credits over two semesters, embedded within the Master of Science in Climate degree, with six credits counting toward both the certificate and the Master of Science degree;

THEREFORE BE IT RESOLVED that the University Senate approve the Advanced Certificate in Climate and Energy Solutions; and

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

Proponent: Education Committee

Executive Summary | Advanced Certificate in Climate and Energy Solutions

Proposal summary

The Columbia Climate School proposes a 24-credit Advanced Certificate in Climate and Energy Solutions, developed with Columbia Engineering (SEAS), beginning in Fall 2027. Embedded within the 52-credit, in-person MS in Climate, it serves students from varied backgrounds seeking expertise in evaluating, developing, and deploying sustainable energy solutions. The pathway combines climate science and energy engineering with quantitative analysis, energy justice, and the financial, legal, and commercialization conditions for deployment.

The certificate comprises six credits shared with the MS core in climate mitigation and adaptation, four designated required courses totaling 12 credits, and six selective credits from 13 confirmed Climate School and SEAS options. Required courses address climate and energy solutions, energy justice, alternative energy resources, and energy sources and conversion. Students must also take Machine Learning and AI for Climate Science and Solutions within the MS core, outside the 24 certificate credits. An energy-focused MS capstone provides integrative assessment. The degree spans five semesters, including a summer practicum, over 70 weeks.

Projected certificate entrants increase from 20 in 2027–28 to 30 in 2030–31, with no stated enrollment cap. Greeshma Gadikota, Lenfest Earth Institute Professor of Climate Change and Professor of Earth and Environmental Engineering, would direct the program at 20 percent effort, supported by faculty advising and the MS program manager. No new faculty or courses are required at launch. The proposal uses the overall MS financial model. Demand evidence includes current-student requests, employer feedback, and 2,369 prospective students expressing broad interest in climate and energy.

Education Committee review

The October 29, 2026, committee report finds that revisions address academic, capacity, and overlap concerns. The Climate School supplied a competency-to-course assessment map, made the AI course explicitly mandatory, confirmed the selective list, and specified an energy-focused capstone. Career claims now distinguish broadly relevant fields from specialized roles requiring additional preparation. Reported consultation with SIPA sharpened the pathway's technical and deployment focus, and SIPA raised no further concerns.

The signed SEAS letter commits to annual course offerings, reserved seats in the two required Engineering courses, alternate instructors when needed, and additional sections if enrollment exceeds reserved capacity. Selective-course access remains coordinated course by course. For students without engineering backgrounds, the Climate School proposes thermodynamics preparation within CLMT 5075, tutoring, and optional additional training to support readiness for MECE 4211.

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

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:	Advanced Certificate
Program Name:	Climate and Energy Solutions
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):	Columbia Climate School
Proposed Start Date:	Fall 2027
Name and Email Address of the Primary Contact Person for this Proposal:	Alix Schroder, aschroder@climate.columbia.edu
Date of Proposal Submission:	March 24, 2026 *re-submitted* Original submission in March 26, 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 Climate and Energy Solutions Advanced Certificate is a 24-credit embedded certificate within the MS in Climate degree in the Columbia Climate School. The MS in Climate is a two-year, professional program designed to prepare students to be future climate leaders at community, state, national, and international levels working in a range of institutions. The MS in Climate provides students with core climate knowledge, while enabling them to acquire deeper understanding and skills in a specific area of expertise through an embedded second credential, which can be satisfied through a New York State-level certificate or a dual degree. The second credential provides students with critical specializations in the growing climate field and prepares them to succeed professionally in a topic of their choice. The program is targeted at young and mid-career professionals, as well as future academics, from a variety of backgrounds.

The Climate and Energy Solutions Advanced Certificate will equip students with the foundational knowledge and skills for successful development and deployment of emerging solutions needed for a sustainable climate and energy future. This certificate will be offered in close partnership with the School of Engineering and Applied Sciences (SEAS), with students taking courses in both schools. Students' educational experiences will be grounded in the underlying technological, legal, and commercialization frameworks needed for successful deployment. Topics and skills covered in this certificate include:

- The scientific and technological basis underlying emerging climate and energy solutions
- Opportunities and challenges associated with enabling access to emerging energy technologies that deliver climate and environmental benefits
- Advances in financial and legal frameworks that are needed for the successful deployment of climate and energy solutions
- Strategies to advance the commercialization and delivery of affordable and accessible climate and energy solutions to maximize societal benefits

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 certificate will not replace any existing programs and does not duplicate offerings in other schools. The program has been developed to ensure clear differentiation and complementarity.

The Climate School consulted with SIPA regarding potential overlap with the Climate, Energy, and Environment (CEE) concentration embedded in their MIA/MPA degrees. While both programs are focused on climate and energy, they differ substantially in orientation, degree context, and learning objectives. Our proposed certificate is embedded within the MS in Climate and developed in partnership with SEAS. It emphasizes energy systems, technology deployment, quantitative analysis, and the scaling of robust and scientifically viable solutions to address the climate and energy crisis — offering a design and technology-focused framework distinct from the policy, diplomacy, and finance-focused concentration in the SIPA

degrees. The certificate also differs from related certificates offered through SEAS, which are largely 12-credit, fully online programs offered independently of a master's degree and concentrated within specific engineering domains.

2) Need

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

Energy is at the core of the climate challenge because most greenhouse gas emissions come from how we produce and use energy, making the transition to cleaner energy systems essential. This program responds to growing local, statewide, and national demand for professionals who can translate climate commitments into implementable energy and technology solutions. Recent federal and state legislation have catalyzed unprecedented public and private investment in clean energy, electrification, grid modernization, carbon management, and climate innovation. In order to meet these policy commitments, professionals are needed to understand not only climate science, but also the technological, financial, regulatory, and commercialization frameworks necessary to deploy solutions at scale.

Locally, New York has positioned itself as a leader in climate and energy innovation, creating demand for professionals who can support a range of energy-related projects, from renewable energy buildout, grid modernization, energy justice initiatives, to low-carbon technology commercialization. Nationally and globally, employers across government, utilities, finance, consulting, startups, non-profits, and multinational firms are seeking talent with knowledge at the intersection of energy and climate.

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

Yes. Current students at the Climate School have explicitly asked for coursework on the energy solutions that would enable them to navigate the complexities of energy security and sustainability and uncertain climate futures. We have also seen increasing interest in specialized academic paths, like this one at the intersection of climate and energy, that emphasize actionable solutions, innovation, and the skills needed in climate-related careers.

There is also an overwhelming interest in this type of program from prospective students. Since May 2022, our admissions team has had ***2,369 prospective students*** indicate an interest in "Climate and Energy" as an academic area of focus. This includes leads that originated through inquiry forms, information sessions, one-on-one appointments, and graduate fairs.

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 considered when designing the program?

Yes. This program responds directly to this workforce need by equipping graduates with the interdisciplinary expertise required to advance affordable, scalable, and equitable climate and energy solutions.

Our career team regularly engages in discussions with industry and practitioners and has identified energy as a leading area of hiring demand. The curriculum is intentionally structured to equip students with practical knowledge of emerging energy technologies, commercialization pathways, financial and legal frameworks, and implementation strategies. As an embedded credential within the MS in Climate program, the certificate aligns directly with current employment demands and prepares graduates for climate leadership roles across the public, private, and nonprofit sectors.

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

There are several universities that offer related graduate certificates. A sampling is highlighted below. Notably, all of these certificates are standalone programs, varying in scope and depth.

The Advanced Certificate in Climate and Energy Solutions is unique, given that it is embedded within a larger master's degree in climate and that it focuses on energy solutions and deployment.

Institution	Program	Website	Description
Northeastern University	Graduate Certificate in Sustainable Energy Systems	Sustainable Energy Systems Graduate Certificate - Northeastern University	Standalone certificate that focuses on the integration of energy systems engineering technology with sustainable building systems [4 courses]
Northeastern University	Graduate Certificate in Climate and Engineering	Graduate Certificate in Climate and Engineering - Department of Civil & Environmental Engineering	Standalone certificate provides students with foundational knowledge in the climate system and our ability to mitigate or sequester emissions and adapt to climate change [3 courses]
University of Massachusetts Boston	Clean Energy & Sustainability Certificate	Clean Energy & Sustainability Certificate - UMass Boston	Standalone certificate that prepares students for careers in energy efficiency, smart grids, carbon trading, and related financial and professional services. [4 courses]
Johns Hopkins University	Climate Change, Energy, and Environmental Sustainability Graduate Certificate	Climate Change, Energy, and Environmental Sustainability, Graduate Certificate | Johns Hopkins University Academic Catalogue	Standalone certificate that provides coursework on energy, sustainability, and climate for engineers, scientists, and managers to design and implement solutions to environmental, social, and economic challenges. [5 courses]
Yale University	Financing and Deploying Clean Energy Certificate Program	Financing and Deploying Clean Energy Certificate Program	10-month, admissions-based online certificate for working professionals who seek to accelerate an equitable transition to a clean economy.

3) Curriculum

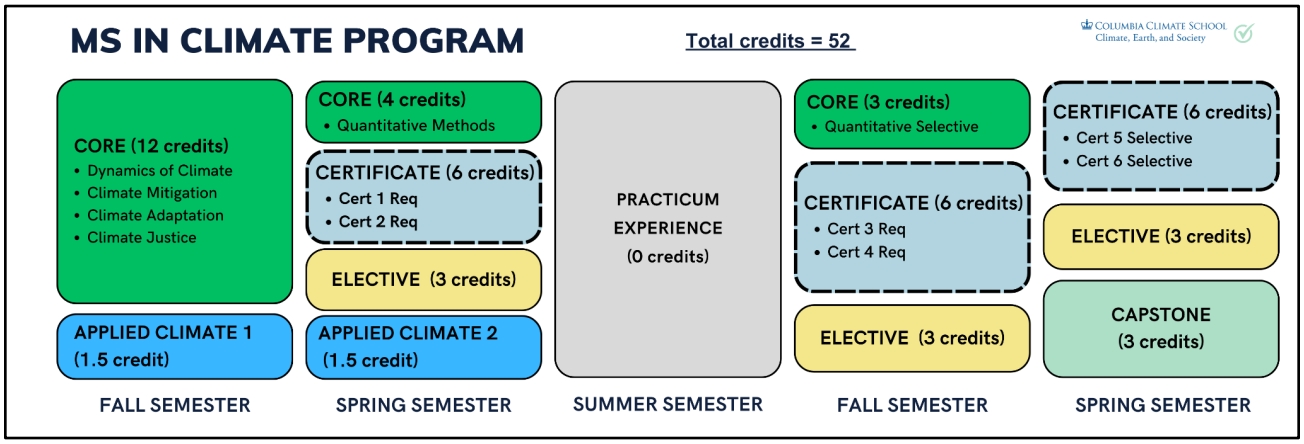
A) Provide a brief summary of the program, in the form of a one-paragraph catalog or website description.

The Climate and Energy Solutions Advanced Certificate will equip students with the foundational knowledge and skills for successful development and deployment of sustainable climate and energy solutions. This certificate will be offered in close partnership with the School of Engineering and Applied Sciences (SEAS), with students taking courses in both schools. Students' educational experiences will be grounded in the underlying technological, legal, and commercialization frameworks needed for successful deployment. Topics and skills covered in this certificate include:

- The scientific and technological basis underlying emerging climate and energy solutions
- Opportunities and challenges associated with enabling access to emerging energy technologies that deliver climate and environmental benefits
- Advances in financial and legal frameworks that are needed for the successful deployment and scaling of climate and energy solutions

- Strategies to advance the commercialization and delivery of affordable and accessible climate and energy solutions to maximize societal benefits

Students must take 18 credits of designated certificate courses – 12 credits of required courses and 6 credits that can be fulfilled through a selective list. A typical course is 3 credits, with some offered for 1.5 credits to maximize options and scheduling flexibility for students. Below is the certificate pathway, at a glance.



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.*

Students must complete 24 credits for the certificate, embedded within the MS degree. Two of the core courses (6 credits) – Climate Change Mitigation and Climate Change Adaptation – will double-count towards the certificate and the MS degree. Students then take 18 credits of designated certificate courses.

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).

Below is a list of the required courses in the certificate, all offered in the Climate School. For selectives, we have included a "sample list" of courses from which the students could choose. These options will be confirmed before the launch of the program. In the coming years, the Climate School will develop and launch additional courses in this academic area that students can take as selectives.

REQUIRED 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**
core course; double counting	CCS	CLMT 5008	Climate Change Mitigation (Lisa Sachs)	In-person	3
core course; double counting	CCS	CLMT 5015	Climate Change Adaptation (Lisa Dale, Kristina Douglass, and Jeff Schlegelmilch)	In-person	3
	CCS	CLMT 5075	Climate & Energy Solutions (Greeshma Gadikota)	In-person	3
	CCS	CLMT 5039	Energy Justice Seminar (Sheila Foster)	In-person	3

	SEAS	EAEE 4002	Alternative Energy Resources (Dan Steingart)	In-person	3
	SEAS	MECE 4211	Energy Sources and Conversion (Vijay Modi)	In-person	3
SELECTIVE COURSES **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**
Below is a "SAMPLE" list of courses students can take to satisfy the selective requirements for this certificate.					
	CCS	CLMT 5048	The Politics of Energy Evolution: From the Industrial Revolution to the Green New Deal (Leah Aronowsky)	In-person	1.5
	CCS	CLMT 5040	Industrial Policy and the Clean Energy Transition (Narayan Subramanian)	In-person	1.5
	CCS	CLMT5034	Climate Policy and Investment: Driving the Energy Transition (Lisa Sachs)	In-person	3
	CCS	CLMT 5046	C2: Carbon and Climate (Gisela Winckler)	In-person	3
	CCS	CLMT 5031	Financing Renewable Energy (Nadia Zaets)	In-person	3
	SEAS	EEEL 4220	Energy System Economics and Optimization (Bolun Xu)	In-person	3
	SEAS	ELEN 6593	Topics in Smart Electric Energy Smart Grid (Mohamed Kamaludeen)	In-person	3
	SEAS	EAEE 4300E	Intro to Carbon Management (Sara Hamilton)	In-person	3
	SEAS	MECE 4313E	Decarbonizing Buildings Studio (Marc Zuluaga)	In-person	3
ELECTIVE COURSES **Minimum number of elective credits = __0___**	**School**	**Course Number (indicate if course is NEW)**	**Course Title & Instructor**	**Indicate whether course is fully, partially, or not at all online**	**# of Credits**
No electives required for this certificate.					

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."

Semester 1: FALL 1			
Course Number & Title	**Credits**	**New?**	**Prerequisites**
CLMT GR5001: Dynamics of Climate Variability and Climate Change	3	No	None
CLMT GR5015: Climate Change Adaptation	3	No	None
CLMT GR5008: Climate Change Mitigation	3	No	None
CLMT 5023: Climate Justice: Theory, Practice, and Policy	3	No	None
CLMT 5050: Applied Climate 1	1.5	No	None
TOTAL CREDITS FOR SEMESTER:	14		
Semester 2: SPRING 1			

Course Number & Title	Credits	New?	Prerequisites
CLMT GR5002: Quantitative Methods for Climate Applications	4	No	None
Elective	3	No	None
Certificate 'Req' Course CLMT 5075: Climate & Energy Solutions	3	No	None
Certificate 'Req' Course EAEE 4002: Alternative Energy Resources	3	No	None
CLMT 5055: Applied Climate 2	1.5	No	Applied Climate 1
TOTAL CREDITS FOR SEMESTER:	15		
Semester 3: SUMMER			
Course Number & Title	**Credits**	**New?**	**Prerequisites**
Summer Practical Experience	0		None
TOTAL CREDITS FOR SEMESTER:	0		
Semester 4: FALL 2			
Course Number & Title	**Credits**	**New?**	**Prerequisites**
Core Selective	3	No	None
Certificate 'Req' Course CLMT 5039: Energy Justice Seminar	3	No	None
Certificate 'Req' Course MECE4211: Energy Sources and Conversion	3	No	None
Elective	3	No	None
TOTAL CREDITS FOR SEMESTER:	12		
Semester 5: SPRING 2			
Course Number & Title	**Credits**	**New?**	**Prerequisites**
Certificate 'Selective' Course	3	No	None
Certificate 'Selective' Course	3	No	None
Elective	3	No	None
CLMT GR5007: Capstone Workshop	3	No	Core & certificate courses
TOTAL CREDITS FOR SEMESTER:	12		

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.*

Typical weeks in the Academic Year = **30 weeks**

- Fall semester: 15 weeks
- Spring semester: 15 weeks

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.***

The total number of weeks it would take a typical full-time student to complete the program is 70 weeks. Full-time students in the MS in Climate can complete the program in five semesters:

- Fall 1: 15 weeks
- Spring 1: 15 weeks
- *Summer: 10 weeks [required practical experience]*

- Fall 2: 15 weeks
- Spring 2: 15 weeks
- Total = 70 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.

This certificate will be offered in partnership with Engineering. As such, two (6 credits) of the four required courses will be offered in the School of Engineering. These are existing courses taught by Vijay Modi and Dan Steingart, respectively, who are both joint faculty between the Climate School and Engineering. Our schools have discussed and agreed that Engineering will either reserve seats in these courses for the certificate students or offer an additional section for these students (depending on enrollment numbers). We will coordinate across schools on the appropriate registration and scheduling processes, as well as the financial arrangement between our two schools.

The two *selective* courses (6 credits) within this certificate allow students to choose courses from a list of pre-selected courses offered at the Climate School and Engineering. We will coordinate to ensure any Engineering course listed on the selective list has the appropriate registration (i.e., early registration for certificate students) and scheduling considerations.

Students are not allowed to take courses in other schools to satisfy any certificate course requirements.

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.

No new courses are being developed for the launch of this program. All courses listed in this proposal have been offered previously. We do anticipate building additional courses in this space as the certificate grows, that will be of interest not only to our Climate and Energy Certificate students but also more broadly to our MS Climate cohort and the other graduate students across the Climate School.

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

As mentioned, students enrolled in the MS in Climate must complete a second credential embedded within the degree, in the form of either a certificate or a dual degree. A limited number of credits will be double counted between the MS degree and the certificate embedded *within* the program, consistent with University policy and aligned with current practice at other professional schools.

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.***

Yes, we have been in touch with Amanda Bielskas (Director, Science, Engineering, & Social Sciences Libraries) to seek guidance on how best to collaborate in support of the MS Climate program. Columbia's libraries already have significant resources to support climate and environmental research – diverse collections, data sets, subject specialists, and more. A few initial points for collaboration were identified (noted below), and we will continue to engage on the development of materials and support for students in this program.

- Climate-Specific Resources – access to extensive resources on climate and related topics, which the Libraries have been increasing in recent years. Climate justice, in particular, is a growing area of research they are looking to expand.
- Data Research Services – technical help through individual consultations, bootcamps, and workshops for Python, R, Stata, SPSS, GIS, and JavaScript.
- Data Sets and Collections – if we need any specific data sets not currently in the libraries, we can request, and the libraries can acquire them.
- Research Support and Guides – individual or course library instruction sessions, notably for the applied learning and capstone courses.

5) Faculty

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

The program director will be Greeshma Gadikota (Lenfest Earth Institute Chair and Professor in the Department of Earth and Environmental Engineering and Columbia Climate School). It is estimated that approximately 20% effort will be dedicated to program administration.

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.

The Climate and Energy Systems Certificate *will not* require the hiring of new faculty at its inception. The Climate School is hoping to hire more faculty with expertise in energy as the program grows, either through tenure-track faculty or lecturer hires.

6) Students

A) Describe the requirements for admission to the program.

All students will be admitted into the MS in Climate program with the requirements listed below. Enrolled students will be asked to declare their chosen certificate in the first fall semester. Exact declaration deadlines will be determined before the program launches and communicated clearly to students. Some certificates may choose to add additional requirements for selection.

Below are the requirements for admission into the MS program:

Deadline for Fall Admission:	March 1
Deadline for Early Admission:	January 15
Resume Requirement:	Yes
Writing Sample:	No
GRE General:	No
Degree Programs:	Full Time
Free-Standing:	Yes
Letters of Recommendation:	3

Due to the interdisciplinary nature of climate and its complex impacts, the MS in Climate admits students

from a wide variety of academic backgrounds. This includes applicants from undergraduate and graduate programs in sciences, engineering, public health, social sciences, humanities, public policy, law, and business.

In addition to the requirements listed above, all applicants must have a Bachelor of Arts or Science, submit a transcript showing courses and grades per school attended, a statement of academic purpose, and three letters of recommendation. At least one letter of recommendation must be submitted by an academic recommender for applicants who have received a degree within the last five years. Applicants also must be able to articulate what knowledge and skills they are looking to develop through the MS in Climate and their professional goals after completing the program.

The Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or the Duolingo English Test is required for applicants who did not complete their undergraduate degree at a four-year English-speaking institution.

Some undergraduate-level coursework on climate or a related topic is preferred, along with knowledge of calculus, undergraduate-level courses in introductory statistics or data analysis, and previous social science courses or related experience.

To be considered for financial support, students must submit their application by the priority deadline date. Applications submitted by the priority deadline will receive a decision by the end of March. Applications received after the priority deadline will be reviewed on a rolling basis.

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.

This advanced certificate will be embedded within the MS Climate program. Below is the estimated enrollment growth for the MS Program as well as expected numbers of students who will declare this certificate after beginning the program. *Note: the MS Climate numbers do not include projected dual degree students.*

Academic Year	MS Climate (entering class)	Climate & Energy Solutions Adv. Cert (entering)
2026 - 2027	48	N/A (not launched yet)
2027 - 2028	85	20
2028 - 2029	89	24
2029 -2030	94	28
2030 - 2031	99	30

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.

There are multiple roles for which this program will prepare prospective students in various sectors within the private, public, and non-profit sector. Graduates will also be prepared for emerging roles in the rapidly growing climate and energy technology sector, including positions in clean energy innovation, digital energy systems, and climate tech product development.

Climate and Energy Transition Job Examples		
Private Sector	**Public Sector**	**Non-Profit Sector**
Energy Systems Analyst	Energy Systems Modeler	Community Energy Planner
Corporate Sustainability / Energy Manager	Public Utility Analyst/Manager	Just Transition Program Lead
Energy Systems Modeler	Energy Infrastructure Planner	Climate and Energy Justice Advocate/Analyst
Sustainable Energy Finance Analyst	Energy Technologies Program Manager	Sustainable Energy Workforce Development Lead
Climate Tech Product Manager	City/Municipal Climate Officer	Climate & Energy Researcher
Renewable Energy Project Developer	Energy Resilience Planner	Nonprofit Grant Writer (Energy & Climate)
Consultant (Energy)	Research Associate (Energy)	Investor in Energy and Climate Solutions

7) Online Delivery. If the proposed program will have an on-line 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 outcomes, and assessment methods; and if not, indicate how they will differ.

This program will be offered as an in-person program.

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

N/A

C) Please describe: N/A

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.

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.

The program will be evaluated through all the standard evaluation procedures for academic degrees. These include, but are not limited to, end of semester course evaluations, intermittent course evaluations at approximately five-week intervals, feedback sessions with faculty program directors, students and key administrators, standard town-hall meetings between the dean and students, student government feedback, and end-of-program exit surveys.

The Climate School deploys a comprehensive evaluation protocol in sync with the innovative nature of the program. This includes the following:

- Current student "quality of program" surveys, deployed every two weeks:
    - Mapped to randomized groups of 5% of the student body
    - Mapped to a control group of 15 students

- End-of-semester program-level evaluations (in addition to course evaluations)

- Alumni "quality of program" surveys with additional focus on career/skill/program match and success for each graduate, deployed routinely after graduation.
- Employer surveys, launched in partnership with the Office of Career Placement.

Reasonable and achievable improvements to the program will be put in motion in real-time based on the results of these on-going evaluations. Other shifts and augmentations will be considered and enacted based on a number of factors, including resource requirements and the calendar. The program will be rigorously evaluated at the end of year two (after the graduation of the first student cohort) and the faculty director will determine which of the additional evaluation elements will be continued in the following year. The faculty program director, the Climate School's Committee on Instruction (COI) and the dean will be directly involved and guide all of these processes.

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
Goal 1: Students will establish the foundational knowledge and skills to evaluate climate and energy solutions.	Direct: Coursework (in-class assignments, exams, group projects, capstone projects) Indirect: Course evaluations, end-of-program exit survey, alumni survey.
Goal 2: Students will learn to harness novel technological, financial, and legal energy frameworks, drawing from the expertise of the Climate School and Columbia Engineering, to inform responsible deployment.	Direct: Coursework (in-class assignments, exams, group projects, capstone projects). Indirect: Course evaluations, end-of-program exit survey, alumni survey.
Goal 3: Students will learn strategies to make decisions and communicate amid uncertainty in the context of climate and energy solutions.	Direct: Coursework (in-class assignments, exams, group projects, capstone projects). Indirect: Course evaluations, end-of-program exit survey, alumni survey.
Goal 4: Students will analyze the key risks and mitigation strategies to inform the responsible deployment of climate and energy solutions.	Direct: Coursework (in-class assignments, exams, group projects, capstone projects). Indirect: Course evaluations, end-of-program exit survey, alumni survey.
Goal 5: Students will learn to analyze complex data, and harness the responsible use of AI to inform the scalable deployment of climate and energy solutions to deliver maximum societal benefits.	Direct: Coursework (in-class assignments, exams, group projects, capstone projects). Indirect: Course evaluations, end-of-program exit survey, alumni survey.

Presidential Advisory Committee on Sexual Assault Annual Report (2025-2026)

The Presidential Advisory Committee on Sexual Assault (PACSA) is one of several Columbia University initiatives to address gender-based misconduct and is charged with advising the president on issues related to the prevention of and response to gender-based misconduct, including sexual assault. The Committee was created in 2006 through a Senate resolution and works with partners and experts across the University to evaluate policies and procedures and solicit feedback from the Columbia community with the goal of eliminating sexual assault and other forms of gender-based misconduct from our community.

Membership

The President appoints all members of the committee. The 2025-2026 Committee comprises faculty, staff, and students from across Columbia's campuses. Committee members are appointed to two-year terms, which may be extended by the President. Ex-officio members have no term limits.

Committee Members:

Chairs

- Claude Ann Mellins (Professor of Medical Psychology (in Psychiatry and Sociomedical Sciences) at CUIMC)
- Melanie Bernitz (Executive Vice President, University Life and Well-Being, Associate Clinical Professor of Medicine (in the Center for Family and Community Medicine))

Term-limited Members

- Jeanine D'Armiento (Chair, University Senate; Professor of Medicine (in Anesthesiology and Physiology and Cellular Biophysics))
- Richard J. Eichler (Associate Vice President, Counseling and Psychological Services, Columbia Health)
- Marcy Ferdschneider (Assistant Vice President, Student Health on Haven; Assistant Professor of Medicine at CUIMC)
- Helen Han Wei Luo (Student, Graduate School of Arts and Sciences)
- Mahlon Mathieson (Student, School of Nursing)
- Huda Paracha (Student, Barnard College)
- Susan Witte (Professor of Social Work, School of Social Work)

Ex-officio Members

- Donna Fenn (Deputy General Counsel)
- Marjory D. Fisher (Associate Vice President & Title IX Coordinator, Office of Institutional Equity)
- Laura Kirschstein (Vice Provost, Office of Institutional Equity)
- La'Shawn Rivera (Senior Executive Director, Sexual Violence Response, Columbia Health)
- Colleen Walsh (Senior Director of Title IX Investigations, Office of Institutional Equity)

Discussions:

During the 2025-2026 academic year, the Committee met twice — on January 26, 2026 and March 30, 2026. At the January meeting, partners across the University briefed the Committee on the status of Title IX and the Office of Institutional Equity, the University's revised Title IX and Related Misconduct Policy that took effect on September 30, 2025, trends in reported cases of gender-based misconduct, and ongoing programming supporting prevention of and response to gender-based misconduct. The Committee was also informed of the presidential transition, with President-Designate Jennifer Mnookin set to begin in July 2026.

At the March meeting, the Committee followed up on questions raised at the January meeting regarding the 49% rate of unresponsive complainants identified in Title IX case data, reviewing longer-term data and contextual factors — including findings from the Sexual Health Initiative to Foster Transformation (SHIFT) — that suggest patterns of non-reporting and non-responsiveness predate recent data collection and are consistent with trends observed at peer institutions. The Committee then engaged in an extended discussion of PACSA's history, structure, and evolution since its creation in 2006, including its shift over time from a deliverable-focused advisory model toward a greater emphasis on policy and programming updates. This discussion led to an open conversation about the Committee's current charge and scope, institutional trust, and community response in light of the Robert Hadden matter, including questions about the Committee's engagement with University leadership, the transparency of agenda-setting, the adequacy of current listening-session efforts, and the need to ensure student and community voices remain central to the Committee's work going forward.

Additionally, the Committee had presentations on the following topics during the 2025-2026 academic year:

- Office of Institutional Equity: Overview of the Revised Title IX and Related Misconduct Policy and Procedures
- Title IX and Gender-Based Misconduct Case Data and Trends, July 2020–June 2025
- The Lived Experiences and Needs of Students (LENS) Survey: History, 2024 Data, and 2026 Survey Administration
- Columbia Health Sexual Violence Response: Relationship Violence Awareness Month (RVAM) 2025 and Sexual Assault Awareness Month (SAAM) 2026

Recommendations:

The Committee recommends the following related to the discussions and work from the 2025-2026 academic year:

1. To review PACSA's charge and scope with incoming President Mnookin.
2. To revisit the Committee's meeting format and its engagement model with University leadership to allow for deeper, meaningful advisory engagement that is consistent with PACSA’s charge.
3. To ensure greater transparency in agenda-setting so that significant, emerging institutional matters related to the application of the Title IX policy and the supportive resources available to our community members are appropriately and proactively incorporated into Committee discussions.

4. To further examine the institutional and environmental factors contributing to the sustained rate of unresponsive complainants, drawing on longer-term data such as SHIFT and comparisons with peer institutions.
5. To explore how PACSA can support individual schools and departments by sharing optional guidance, tools, and best practices, including approaches to listening sessions, developed in response to community concerns.
6. To ensure that student input remains central to determining Committee priorities and the future scope of PACSA's work.

Presidential Advisory Committee on Sexual Assault Annual Report (2025-2026)

The Presidential Advisory Committee on Sexual Assault (PACSA) is one of several Columbia University initiatives to address gender-based misconduct and is charged with advising the president on issues related to the prevention of and response to gender-based misconduct, including sexual assault. The Committee was created in 2006 through a Senate resolution and works with partners and experts across the University to evaluate policies and procedures and solicit feedback from the Columbia community with the goal of eliminating sexual assault and other forms of gender-based misconduct from our community.

Membership

The President appoints all members of the committee. The 2025-2026 Committee comprises faculty, staff, and students from across Columbia's campuses. Committee members are appointed to two-year terms, which may be extended by the President. Ex-officio members have no term limits.

Committee Members:

Chairs

- Claude Ann Mellins (Professor of Medical Psychology (in Psychiatry and Sociomedical Sciences) at CUIMC)
- Melanie Bernitz (Executive Vice President, University Life and Well-Being, Associate Clinical Professor of Medicine (in the Center for Family and Community Medicine))

Term-limited Members

- Jeanine D'Armiento (Chair, University Senate; Professor of Medicine (in Anesthesiology and Physiology and Cellular Biophysics))
- Richard J. Eichler (Associate Vice President, Counseling and Psychological Services, Columbia Health)
- Marcy Ferdschneider (Assistant Vice President, Student Health on Haven; Assistant Professor of Medicine at CUIMC)
- Helen Han Wei Luo (Student, Graduate School of Arts and Sciences)
- Mahlon Mathieson (Student, School of Nursing)
- Huda Paracha (Student, Barnard College)
- Susan Witte (Professor of Social Work, School of Social Work)

Ex-officio Members

- Donna Fenn (Deputy General Counsel)
- Marjory D. Fisher (Associate Vice President & Title IX Coordinator, Office of Institutional Equity)
- Laura Kirschstein (Vice Provost, Office of Institutional Equity)
- La'Shawn Rivera (Senior Executive Director, Sexual Violence Response, Columbia Health)
- Colleen Walsh (Senior Director of Title IX Investigations, Office of Institutional Equity)

Discussions:

During the 2025-2026 academic year, the Committee met twice — on January 26, 2026 and March 30, 2026. At the January meeting, partners across the University briefed the Committee on the status of Title IX and the Office of Institutional Equity, the University's revised Title IX and Related Misconduct Policy that took effect on September 30, 2025, trends in reported cases of gender-based misconduct, and ongoing programming supporting prevention of and response to gender-based misconduct. The Committee was also informed of the presidential transition, with President-Designate Jennifer Mnookin set to begin in July 2026.

At the March meeting, the Committee followed up on questions raised at the January meeting regarding the 49% rate of unresponsive complainants identified in Title IX case data, reviewing longer-term data and contextual factors — including findings from the Sexual Health Initiative to Foster Transformation (SHIFT) — that suggest patterns of non-reporting and non-responsiveness predate recent data collection and are consistent with trends observed at peer institutions. The Committee then engaged in an extended discussion of PACSA's history, structure, and evolution since its creation in 2006, including its shift over time from a deliverable-focused advisory model toward a greater emphasis on policy and programming updates. This discussion led to an open conversation about the Committee's current charge and scope, institutional trust, and community response in light of the Robert Hadden matter, including questions about the Committee's engagement with University leadership, the transparency of agenda-setting, the adequacy of current listening-session efforts, and the need to ensure student and community voices remain central to the Committee's work going forward.

Additionally, the Committee had presentations on the following topics during the 2025-2026 academic year:

- Office of Institutional Equity: Overview of the Revised Title IX and Related Misconduct Policy and Procedures
- Title IX and Gender-Based Misconduct Case Data and Trends, July 2020–June 2025
- The Lived Experiences and Needs of Students (LENS) Survey: History, 2024 Data, and 2026 Survey Administration
- Columbia Health Sexual Violence Response: Relationship Violence Awareness Month (RVAM) 2025 and Sexual Assault Awareness Month (SAAM) 2026

Recommendations:

The Committee recommends the following related to the discussions and work from the 2025-2026 academic year:

1. To review PACSA's charge and scope with incoming President Mnookin.
2. To revisit the Committee's meeting format and its engagement model with University leadership to allow for deeper, meaningful advisory engagement that is consistent with PACSA’s charge.
3. To ensure greater transparency in agenda-setting so that significant, emerging institutional matters related to the application of the Title IX policy and the supportive resources available to our community members are appropriately and proactively incorporated into Committee discussions.

4. To further examine the institutional and environmental factors contributing to the sustained rate of unresponsive complainants, drawing on longer-term data such as SHIFT and comparisons with peer institutions.
5. To explore how PACSA can support individual schools and departments by sharing optional guidance, tools, and best practices, including approaches to listening sessions, developed in response to community concerns.
6. To ensure that student input remains central to determining Committee priorities and the future scope of PACSA's work.

Presidential Advisory Committee on Sexual Assault

Annual Report — 2025–2026 Academic Year

History of PACSA

1995

University-wide policy on sexual assault established

2000 / 2005

Policy reviewed and reaffirmed by the Task Force on Sexual Misconduct

2005

First Senate resolution on the subject passed

Feb 2006

PACSA created by Senate resolution; review authority of the policy transferred to PACSA

2014

Most recent Senate Resolution; established the structure still in place today

There have been no subsequent changes or resolutions to the mandate since 2014.

Charge

Under the 2014 Resolution, PACSA:

- ✓ Reevaluates existing policies and procedures regarding gender-based misconduct in the Columbia University community
- ✓ Presents recommendations for revisions of these policies and procedures to the University Senate
- ✓ Works toward the goal of eliminating sexual assault and other forms of gender-based misconduct from our community
- ✓ Submits an annual report to the President and to the Senate

Committee Membership

CHAIRS		
Claude Mellins	Professor of Medical Psychology (in Psychiatry and Sociomedical Sciences) at the Columbia University Medical Center	*Co-Chair*
Melanie Bernitz	Executive Vice President, University Life & Well-Being; Associate Clinical Professor of Medicine	*Co-Chair*
COMMITTEE MEMBERS		
Jeanine D'Armiento	Professor of Medicine (in Anesthesiology and Physiology and Cellular Biophysics)	*Faculty, VP&S*
Richard Eichler	Associate Vice President, Counseling & Psychological Services	*Staff, Columbia Health*
Marcy Ferdschneider	Assistant Professor of Medicine at the Columbia University Medical Center	*Faculty, VP&S + Staff, Columbia Health*
Mahlon Mathieson	Student, School of Nursing	*Student – Graduate*
Helen Han Wei Luo	3rd Year Graduate Student | Ph.D. program in Philosophy; GSAS/Humanities Senator	*Student – Graduate*
Marni Sommer	Professor of Sociomedical Sciences	*Faculty, Public Health*
Susan Witte	Professor of Social Work	*Faculty, Social Work*
Huda Paracha	Student, Barnard College; SAC Co-Chair	*Student – Undergraduate*
EX-OFFICIO MEMBERS		
Donna Fenn	Deputy General Counsel	*Ex-officio – OGC*
Laura Kirchstein	Vice Provost for Equal Opportunity and Affirmative Action	*Ex-officio – EOAA*
La'Shawn Rivera	Senior Executive Director, Sexual Violence Response	*Ex-officio – SVR*
Marjory Fisher	Associate Vice President & Title IX Coordinator	*Ex-officio, Title IX*
Colleen Walsh	Senior Director of Title IX Investigations	*Ex-officio, Title IX*

2025–2026 Meetings at a Glance

Fall Meeting

January 26, 2026

Partners from across the University briefed the Committee on the status of Title IX and the Office of Institutional Equity, the revised Title IX and Related Misconduct Policy, five years of case data and trends, the LENS Survey, and Sexual Violence Response.

Spring Meeting

March 30, 2026

- Follow-up on 49% unresponsive-complainant rate, with SHIFT and peer-institution context
- PACSA's history, structure, and evolution since 2006
- Open discussion: Committee charge and scope
- Agenda transparency, listening sessions, and centering student voice

Presentations to the Committee

1

Office of Institutional Equity

Overview of the revised Title IX and Related Misconduct Policy and Procedures

2

Title IX Coordinator

Title IX and Gender-Based Misconduct case data and trends, July 2020–June 2025

3

LENS Survey

History, 2024 data, and plans for the 2026 survey administration

4

Columbia Health – Sexual Violence Response

Relationship Violence Awareness Month (RVAM) 2025 and Sexual Assault Awareness Month (SAAM) 2026

Recommendations

Arising from the Committee's discussions and work during the 2025–2026 academic year:

1. Review PACSA's charge and scope with incoming President Mnookin.
2. Revisit the Committee's meeting format and engagement model with University leadership for deeper, meaningful advisory engagement.
3. Ensure greater transparency in agenda-setting so significant, emerging matters — including Title IX policy application and community resources — are proactively addressed.
4. Further examine the factors behind the sustained rate of unresponsive complainants, using SHIFT and peer-institution data.
5. Explore how PACSA can share optional guidance, tools, and best practices — including listening-session approaches — with schools and departments.
6. Ensure student input remains central to Committee priorities and PACSA's future scope.

PACSA 2026-2027

1

Advising on the application of policy regarding gender-based misconduct at the University

2

Ongoing review of, and recommendations around, the supportive resources available to our community members

3

Assessment of committee leadership, representation, and new appointments to ensure appropriate expertise

4

Chair keeps the President informed on an ongoing basis; community updated via the annual report and a Senate plenary report

Thank You

Prepared by the Presidential Advisory Committee on Sexual Assault (PACSA)