**B8320/E4444 Climate Tech**

**Spring 2024 (3.0 credits)**

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Communications from professors and teaching assistants about the course will take place through Canvas.

Students should make sure they regularly check for announcements and messaging notifications.

**COURSE DESCRIPTION**

Climate Tech refers to a broad range of technologies designed to mitigate the drivers and impacts of climate change. Development and commercialization of these technologies is essential if humanity is to maintain global prosperity while also avoiding catastrophic climate change. This immersion course provides students with the opportunity to work on a real-world technology to address climate change.

Students will be placed in teams of four, composed of two CBS students and two SEAS students. Student teams will be matched with venture capital funds actively financing climate tech that have identified an innovative technology for mitigating or adapting to climate change. Students will meet virtually with their assigned venture fund at the beginning of the course, during a mid-point check-in, and at the end of the course for the final presentation. The funds will provide guidance on technologies, sectors, and approaches most likely to receive early-stage investments.

Each team will be tasked with assessing their assigned technology on (i) technical viability, (ii) commercial opportunity, and (iii) impact on mitigating or adapting to climate change. The final course deliverables are a presentation to classmates, a presentation to each team’s assigned investment fund, and a written report to the investment fund. Students are also required to complete a reflections assignment at the conclusion of the course. During weeks 4 – 11, when you're working with the venture capital fund, you will spend up to nine hours every week doing independent research, collaborating with the fund, and completing assignments.

The purpose of this immersion course is for students to learn to work in teams across different skill sets and disciplines, combining expertise in business and engineering, with the objective of learning how to evaluate technology solutions to climate change. This course is designed to replicate the real-world experience in which collaborative teams use a multi-disciplinary approach to assess the opportunities, challenges, and impacts of new technology solutions to climate change.

**PRE & COREQUISITE COURSES**

Columbia Business School students applying to this course must have previously completed Business and Climate Change (B8705), Climate Finance (B8363), Climate Policy (B8212), Climate Change and the Energy Transition (B8201), or Foundations of VC (B8439).

**COURSE APPLICATION**

This is an application-only course. Please upload both your CV and your responses to the following questions as one document to the[Application Site](https://docs.google.com/forms/d/1HejXXQITh62MEkKZxH3jo6QSJFjfcwKR1lyE-s41x9c/edit). Please label the document with your first and last name.

1. Why are you interested in this course? (150 words maximum)
2. How will your background inform your contributions to the student team? (200 words maximum)

Applications for MBA students are due **October 27, 2023.**

**STUDENT LEARNING OUTCOMES**

Students will learn to:

1. Evaluate the technical and commercial potential of a technology designed to mitigate and/or adapt to climate change.
2. Measure the impact of a climate tech solution on mitigating or adapting to climate change.
3. Work collaboratively in teams with students bringing different skills (business/engineering).
4. Interact with venture capital professionals and learn about their investment criteria and process.

**CLASSROOM NORMS AND EXPECTATIONS**

**Core Culture**Students are expected to adhere to [CBS Core Culture](https://www8.gsb.columbia.edu/samberg/cbs-core-culture) in this class by being Present, Prepared, Participating.

**Inclusion, Accommodation, and Support for Students**At Columbia Business School we believe diversity strengthens any community or business model and brings it greater success. The School is committed to providing all students with equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias on the basis of gender, sexual orientation, race, ethnicity, socioeconomic status, or ability.

Students with documented disabilities may receive reasonable accommodations. Students are encouraged to contact the Columbia University’s Office of Disability Services for [information about registration](https://www.health.columbia.edu/docs/services/ods/index.html?_ga=2.66448878.1740208239.1652708094-1115603203.1635953391).

Columbia Business School adheres to all community, state, and federal regulations as relate to Title IX and student safety. Read more about CBS’ policies to support [Inclusion, Accommodations and Support for Students here](https://www8.gsb.columbia.edu/samberg/node/686).

**Honor Code And Academic Integrity**

The [Columbia Business School Honor Code](https://www8.gsb.columbia.edu/honor/) calls on all members of the School community to adhere to and uphold the notions of truth, integrity, and respect both during their time in school, and throughout their careers as productive, moral, and caring participants in their companies and communities around the world. All students are subject to the Honor Code for all of their academic work. Failure to comply with the Honor Code may result in [Dean’s Discipline](https://www8.gsb.columbia.edu/mba-students/Dean%27s%20Disciplinary%20Process). Here you can review [examples of Academic Misconduct](https://www8.gsb.columbia.edu/mba-students/academic-essentials/policies/honor-code) which may result in discipline.

**Course Attendance Policies**

Students from all programs should review and be familiar with the [MBA Core attendance policy here](https://www8.gsb.columbia.edu/mba-students/academic-essentials/policies/attendance-requirements). Students are required to attend each class – class attendance and participation will be recorded. The first class is mandatory. Students should reach out to the professors and the CA regarding excused absences (for religious observances; personal, medical, and family emergencies; military service; court appearances such as jury duty). Unexcused absences will affect your overall course grade.

**METHOD OF EVALUATION**

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| *Weekly tracking*  *(A: group/group)* | 20% |
| *Mid-course report*  *(A: group/group)* | 15% |
| *Team presentations*  *(A: group/group)* | 15% |
| *Final project report*  *(A: group/group)* | 40% |
| *Reflections assignment*  *(C: individual/individual)* | 10% |

**Description of Assignments**

This immersive course will involve a great deal of group work in and out of the class, which includes managing the assigned venture fund relationship and project work with your team.

* Weekly Tracking: the weekly tracking includes completion of milestones and next steps.
* Mid-course Report: the mid-course report will serve as a complete draft of the group’s assessment of the assigned technology and will be presented to the assigned venture fund. It must include the following components:
  + Draft technical viability
  + Draft commercial viability
  + Draft impact on climate change mitigation or adaptation
* Team Presentations and Final Project Report: There will be two team presentations:
  + The in-class presentation will include the final project report. Groups will receive feedback on their presentation and report.
  + The venture fund presentation will encompass the final project report and presentation, incorporating feedback from the in-class presentation.
  + Teams can submit their presentation deck as a final report and/or a written report, as agreed with their assigned venture fund.
* Reflections: Individual reflection assignment due after completion of the course.

**COURSE ROADMAP/SCHEDULE**

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| **Session** | **Topic(s)** | **Required Pre-Readings** | **Assignments** [**(Type)**](https://www8.gsb.columbia.edu/honor/definitions) |
| **1**  **Jan 24** | Introduction to Climate Tech   * *Introduction to climate change science* * *Climate solutions by sector* * *Introduction to climate tech* * *Course Plan* | * Climate Change in 2020: Implications for Business (HBS 320-087) * The Future of Climate Tech (SVB) |  |
| **2**  **Jan 31** | Assessing a new technology   * *Evaluating a new climate technology* * *Case study* * *Course process and resources* * *Team assignments* | * Innovating to Net Zero: An Executive’s Guide to Climate Technology * Nextracker Case study |  |
| **3**  Week of  Feb 5 | Student teams meet with assigned venture funds for a 1-hour kick-off meeting and begin project work |  | Weekly tracking  (A: group/group) |
| **4-5**  Weeks of  Feb 12, 19 | Immersive Learning  Students work in teams, no in-class activities. |  | Weekly tracking  (A: group/group) |
| **6**  **Feb 28** | Mid-course check-in #1   * *Challenges and solutions* * *Mid-course corrections* * *Group Social (optional)* |  | Mid-course report  (A: group/group) |
| **7**  Week of  March 18 | Immersive Learning  Students work in teams, no in-class activities. |  | Weekly tracking  (A: group/group) |
| **8**  **March 27** | Mid-course check-in #2   * *Challenges and solutions* * *Mid-course corrections* |  |  |
| **8-11**  March and April | Immersive Learning  Students work in teams, no in-class activities. |  | Weekly tracking  (A: group/group) |
| **12**  **April 24** | In-class Team Presentations |  | Final project report  Team presentation  (A: group/group) |
| **Venture Fund Presentation** (within one week of final class) | | | |
| **Reflections Assignment Due** (one week after final class, Individual type C) | | | |