The Self and the Environment

Integrated Studies, 2024-25

Each year the Benjamin Franklin Scholars (BFS) Program selects an extraordinary group of incoming freshmen to pursue the liberal arts intensively, guided by some of Penn's brightest lights. For students in the College, BFS begins with the Integrated Studies Program (ISP), an exclusive, year-long residential learning experience in which you will survey the broad territory of the arts and sciences while living alongside fellow students and faculty in Hill College House. The program brings together the humanities, social sciences, and sciences into a coordinated exploration of the great ideas that continue to drive our understanding of the world and the human place in it. One key element of ISP is working to develop an understanding of how methods and contents from distinct disciplines can inform one another so as to produce a deeper understanding of a range of questions. A mix of lectures, small seminars, and guest speakers, Integrated Studies fulfills a portion of the College's General Education requirement while building the solid foundation needed for any major area of study you decide to pursue. By the end of their first year, BFS students have not only pursued an intensive introduction to four different disciplines, but engaged in some of the most challenging and important complex thinking which lies at the heart of the liberal arts. We are looking for bold thinkers who become more excited by ideas the more complex they get.

During academic year 2024-25, you will study various aspects of "The Self and the Environment" and examine a wide range of ideas about human identity and environmental history. Drawing on the disciplines of Psychology, Philosophy, Earth and Environmental Sciences, and History, you will not only learn the tools of those disciplines and read contemporary research in those fields but think about how each contributes to understanding human identity and the origins of one of the most consequential challenges of our time: the past and future of our climate.

Admissions questions

1. Why is integrating the humanities, natural sciences/math and social sciences important to you as you contemplate your college career? (100 words or fewer)

2. After your year in the Integrated Studies Program, what would be the mark for you of having achieved success in the Program? (100 words or fewer)

3. You will be studying History, Psychology, Earth and Environmental Sciences, and Philosophy. It will be challenging to excel in all four areas. How do you anticipate approaching what might be a new kind of academic challenge for you? (100 words or fewer)

4. Following these questions, you will find syllabi for the year in ISP. Please read these syllabi and then review **Week 8** of the "Self in Transformation" semester and **Week 11** of the "History of Climate" semester. Choose *either* the Fall 2024 pair of courses *or* the Spring 2025 pair of

courses (but not both) and answer ONE of the following questions. Outside research is neither expected nor desired; we are interested in **your** thought processes.

QUESTIONS

A. You are about to embark on what everyone seems to agree is a new and important phase of your life: college. Where are the most powerful explanations for how you arrived at this point – in your own personal development from child to young adult, or in the expectations and incentives that have surrounded you since childhood? How might these two arenas be connected to each other, and why might that matter for the story you tell yourself about why you are about to matriculate at Penn? (250 words or fewer)

   or

B. Which is the most promising approach to reducing the threats posed by the warming of the earth's climate: technological devices for "solar dimming" and other forms of geoengineering, or the declaration and enforcement of a universal human right to a healthy climate? In what ways are these two approaches in tension with each other, and in what ways are they compatible? What can we hope to learn in this regard by studying natural history along with human history? (250 words or fewer)

5. Finally, please read the following paragraph and indicate that you have read it in your application by stating in writing: "I have read the description of the Integrated Studies Program and I understand its challenges and requirements."

ISP is a rigorous program. It is a liberal arts and sciences intensive course of study for your first year, involving just under half of your course load during your first year. As the gateway experience to being a Benjamin Franklin Scholar, it is designed to be challenging, and asks you to try new and often difficult tasks, not all of which you'll find easy. Its challenges are part of the program's mission – next-level, complex thinking.

Students who complete this program go on to an enormous range of professions, including medicine, law, or business, but **if you want to follow a straight and narrow path to a particular profession, ISP is likely not the right choice for you**. Students who participate in ISP gain an intellectual breadth and agility for approaching complex problems; narrower pre-professional skills are deemphasized in favor of multidisciplinary thinking.

Your statement:

INTG0001: Fall 2024

The Self in Transformation

NATURAL SELF, NURTURED SELF: "How would you describe yourself to yourself?" I was struck by this question when I first encountered it in the work of psychologist Carol Gilligan in the 1990s. Would you describe yourself in terms of your behaviors? Your goals or values? Your relationships? Would you describe yourself in terms of some salient aspect of your identity? Would you emphasize different things about yourself if you lived in a different country or were in a different social setting? Has your description of yourself changed over time? This stream views the self through a psychological lens. We will discuss how the self is organized, how the self changes over time and across contexts, the crucial role of relationships in self-development, cross-cultural differences in conceptualizations of the self, and the role of beliefs about the self in psychopathology. Cutting across these topics is the question of how much nature versus nurture shapes our behaviors, values, and beliefs about ourselves. We will take a life-span developmental perspective on the self, tracing changes in self-understanding, self-regulation, self-esteem, and self-in-relationship from infancy to old age. In addition, we will focus on specific self identities, factors that influence the development of these identities, and the ways in which these change over time, including gendered identity, racial and ethnic minority identity, and immigrant identity.

IS SELF-TRANSFORMATION POSSIBLE? Novels, memoirs, and aisles of self-help books attest to our desire to transform ourselves. Many young adults—like you—arrive to college with the hope that they will undergo a transformative experience. Yet, the idea of self-transformation is puzzling. If a person decides to embark on a new adventure in the hopes of transforming herself, can she really become a new self, or is she merely exhibiting her preexisting adventurousness? Will college really change you in some fundamental way or will you emerge a more educated version of the self that enrolled in college? How might differences in your social identity—gender, race, social class—impact the transformative power of college for you? In this class, we will critically examine the idea of transformation and in the process unpack important philosophical notions such as: the self, aspiration, value, and education. Is education a transformative experience like becoming a parent or undergoing religious conversion? Or is it more like learning to play the piano or cultivating a love of baking? We will approach these questions with a philosophical frame, but we will be reading widely—memoir, sociology, philosophy, journalism—and we will be talking about ideas that will help you figure out what kind of transformation you want from college and whether that is even possible.

Week	Philosophy	Psychology
Week 1	Why are we here? What is college for? What kind of transformation can college offer? Reading: David Foster Wallace, "This is Water"	What is the self? Cross-cultural conceptualizations, organization of self, self-development, self in relationship, nature vs. nurture
Week 2	What is this self that we seek to transform? Can we figure out what kind of transformation is possible from thinking about the nature of the self? Readings: Kathryn Schulz, "The Self in Self-Help"; Hume, "Of Personal Identity"	The self in infancy: when and how do infants develop a sense of self?
Week 3	What can we learn about the self from thinking about the case of Twins? Is personhood for a twin different than personhood for a singleton? Reading: Helena De Bres, Intro & Chapter 1 form How to Be Multiple	The self in infancy: the crucial role of the attachment relationship in self development
Week 4	What is a transformative experience? Can we rationally choose to undergo a transformative experience? Reading: Laurie Paul, Excerpts from Transformative Experiences	The self in early childhood: emergence of objectified sense of self
Week 5	What is a transformative experience? Can we rationally choose to undergo a transformative experience? Reading: Robert Moor, "The Beautiful, Brutal World of Bonsai"	The self in middle childhood: the crucial role of goals and values in the emergence of self-understanding
Week 6	We often must make difficult choices between two valuable options (majors, careers, etc), how should we make such choices? Reading: Ruth Chang, "Hard Choices" (TED talk)	The self in adolescence: "cha-cha-cha-cha-changes" . . . (with thanks to David Bowie
Week 7	What kind of opportunities for growth should children have? What happens when a loving family limits the opportunities available? Is that ethically wrong? Why?	The self in adolescence: the crucial role of peers in self and identity development

	Reading: Tara Westover, Educated Part One	
Week 8	What is required for a young adult to become autonomous? What sacrifices must one make in doing so? For some young people, attending college marks the passage from childhood to adulthood. However, the nature of this transition will vary depending on your social class, your relationship with your family and community, and what you hope to get out of college. For some, leaving for college might involve accessing opportunities their parents didn't enjoy and growing in ways that distance them from their community of origin. For others, college is the expected next step in joining a professional class their parents already belong to. How do these different trajectories impact the transformative potential of higher education? Reading: Tara Westover, Educated Part Two	The self in young adulthood: the narrative self and the importance of role changes. By young adulthood, individuals make sense of themselves with narratives that have these features: (1) they identify themes ("my whole life I've had to overcome adversity"), (2) they sequence episodes into causal chains ("I wouldn't have come to Penn if I hadn't met this influential person"), (3) they illustrate personal growth ("I used to struggle with this challenge, but now I cope with it successfully"), (4) they identify clear beginnings and endings ("once I met my partner, my whole life changed), and (5) they use foreshadowing or retrospective reflection ("looking back on it, I realize that this happened for a reason"). The content of these narratives is heavily influenced by cultural norms around the timing of role progressions (when it is appropriate to complete education, enter the workforce, partner up, have children), the roles themselves (what roles are appropriate for a given person in a given culture or subculture), and by cultural differences in valued themes (in the United States, we value narratives of redemption). We will discuss how these narratives develop from adolescence to young adulthood and how they contribute to self-concept.
Week 9	How does social class and religious background affect the transformational potential of college? Reading: Tara Westover, Educated Part Three	The self in middle age: the generative self and the second puberty!
Week 10	What is aspiration? How does it develop? Reading: Agnes Callard, Introduction from Aspiration RR #6	The self in old age: the forwards and backwards self

Week 11	What is the difference between drifting into a new value and aspiring to a new value? We will discuss passion and how to think about finding it. Reading: Agnes Callard, Chapter 1 from Aspiration	The self: gendered identity development
Week 12	What price do low-income and first-generation college students pay to reap the transformational benefits of a college education? Should college be the institution through which economic mobility happens? Reading: Jennifer Morton, Intro & Chapter 1 from Moving Up Without Losing Your Way	The self in context: in-group/out-group identity
Week 13	What role does race, in particular, the African-American experience play in limiting (or expanding) the opportunities for self-transformation? Reading: W.E. DuBois, "Of Our Spiritual Strivings" RR #8	The self in context: immigrant identity
Week 14	How has technology and quantification changed our relationship to our values? Reading: Nguyen, Thi “Value Collapse”	The self in context: racial/ethnic minority identity
Week 15	What can we learn from thinking about the experience of the person looking back at the choices they made in their youth? Can we unpack what we need now from thinking about middle age? Reading: Kieran Setiya, Chapter 4 of Midlife	The self: problems in self-organization; the self in psychopathology

INTG0002: Spring 2025

History of Climate

CLIMATE SCIENCE:

Climate change is one of the defining challenges of our time. Historical context is critical to understanding the nature of that challenge and our ability to still act to avert catastrophic consequences. Earth's climate has varied over its entire 4.5-billion-year history, and we can learn much about the climate system, with implications for our understanding of modern human-caused climate change, by studying how it varied in the past. Such studies involve both empirical approaches to reconstructing Earth's climate history, and the use of numerical models of Earth's climate system to study the drivers of past climate change and infer key attributes of the climate system from its past variation. At a time when there is widespread despair over the consequences of human-caused planetary warming, studying the past actually reinforces both the urgency of climate action and the agency we still have in averting doom.

ENVIRONMENTAL HISTORY:

Environmental historians work in a space between scientists and humanists. Like all historians, they tell stories about the human past with evidence they interpret. But their stories, unlike conventional histories, include many non-human things, beings, and processes. Environmental historians emphasize how all peoples at all times are entangled in ecological and geophysical systems. Not surprisingly, they incorporate evidence from scientists. However, they tend to regard scientific data as historical products, for scientific knowledge is always culturally embedded. In short, the environmental historian is interested in a multiplicity of climates: 1) the history of Earth's climate as reconstructed by geologists and climatologists; 2) the disciplinary history of climate science; 3) the role of climate, as defined by scientists, in human history; 4) the history of the *idea* of climate. Everything has a history, even the climate of the future.

WEEK	SCIENCE	HISTORY
1	**What is climate?** Distinctions between global and regional climate, and between climate and weather; thinking scientifically about trends, cycles, seasonality, variability, normality, and anomaly; the key drivers of climate, from the astronomical to the biogeochemical to the anthropogenic.	**What and when was climate?** "Climate" as a keyword; what "climate" means to different people at different times; the rise and fall—and rise again—of climate as a causal factor in historical narratives; the western Roman Empire as a famous case study.
2	**Geologic Time Scale**	**Conceptions of time** Brief history of various ways peoples have conceived of time, including cyclical time,

	Brief history of planet Earth, and the division of its past into eras, periods, epochs; the nature of geologic evidence.	linear time, calendrical time. How historians have periodized time, including antiquity and modernity.
3	**Icehouse Earth to hothouse Earth** The geophysical mechanisms behind "Snowball Earth" billions of years ago, the ice-free Paleocene-Eocene Thermal Optimum (PETM), and the glacial/interglacial cycles of the later Pleistocene Epoch; concepts of thresholds, tipping points, and "climate sensitivity."	**"Ice Age" to "Global Warming"** The emergence of geology as a field of study; the culture of *Die Eiszeit*; the later emergence of climate science as a field of study; the continued importance of ice as a signifier; the issue of nomenclature with "greenhouse effect," "climate change," etc.
4	***Homo sapiens* in the happy medium** Hominin evolution; megafaunal extinctions; the dispersal and flourishing of humans in the current interglacial, the Holocene. Why today constitutes a "fragile moment" from a climate standpoint.	**Universalism, localism, determinism** Attempts by past historians to tell universal histories; the connections between historicism, racism, and civilizationism.
5	**"Medieval Warm Period" and Little Ice Age** The extent to which these terms describe regional rather than global phenomena, what the drivers were, and what they may tell us about current human-caused warming.	**Little Ice Age as historical event** What historical outcomes can (and cannot) be attributed to the relatively cold period that coincided with the onset of "modernity"? The problem of causation in history, again. Resilience versus revolution in modern historical narratives.
		Potential reading: Dagomar Degroot et al., "Towards a Rigorous Understanding of Societal Responses to Climate Change," *Nature* 591, no. 7851 (25 March 2021): 539–550.
6	**Jet streams and ocean currents** The geophysical mechanisms behind the circulation of water in the atmosphere and in the ocean; the causes and consequences of circulation variability in the Holocene; what it takes for circulations to shift markedly.	**El Niño, the Pacific World, and Colonialism** How air and water circulation patterns in the Pacific Ocean affected political, economic, and social change in the modern period, from Peru to India.
	Potential reading: Michael E. Mann, "Beyond the Hockey Stick: Climate Lessons from the Common Era," *PNAS* 118, no. 39 (2021): e2112797118	
7	**Volcanic discontinuities** How volcanic activity can cause cooling or warming, on different spatial and temporal	**Tambora and contingency** The 1815 supervolcanic eruption of Mount Tambora, Indonesia, the subsequent "year with

	scales; examples from the human period we can pinpoint; other examples from the historic and geologic past for which evidence is less conclusive.	no summer," the creation of *Frankenstein*, and the idea of historical contingency.
8	**Greenhouse gases** Fossil fuel burning and anthropogenic climate change. Different kinds of greenhouse gases with different properties. The roles of oceans and forests in carbon cycling and carbon sequestration. The different sources of GHG, broken down by countries, and by sources: industrial facilities, transport, livestock, leaky wells, etc.	**Energy regimes** How fossil fuels became desirable, then essential; what they replaced, and what they added to. Petrostates in modern history. Historical narratives of energy regimes and energy transitions. "Fossil fuel" and "carbon footprint" as categories.
9	**Climate data** How do scientists reconstruct past climates with annual resolution? How do they derive data from lake sediments, corals, tree cores, and glacial ice cores? What is the difference between instrumental and proxy climate data?	**Datafied and sacred trees** The history of dendrochronology as a field of study; the interplay of science and religion at ancient trees; how certain conifers dated by tree-ring scientists became de facto sacred groves.
10	**Climate models** How are models built and run? How have they have changed over time? What can we learn from comparing models and observations? What can and can't models do?	**Telling the future** Brief history of how and why people have prophesied, prognosticated, predicted, and forecasted the future—or wagered on it.
11	**Geogovernance and geoengineering** Climate change is currently a science-informed field of international policy, shaped by the United Nations, the Intergovernmental Panel on Climate Change, and various treaty organizations. What are the advantages and disadvantages of supranational organizations taking the lead, versus a relatively small number of powerful states working together; or even individual rogue states working alone?	**Humankind and future generations** What can we learn from the history of large-scale schemes to improve the future of humanity, e.g., the green revolution, vaccines, birth and population control? What happens when we think about the "planet" and "humanity" as legal and political concepts, including a fiduciary responsibility to future generations? Can/should there be a universal human right to a healthy climate?
12	**Politicization and denialism of climate science** Personal takeaways from a career in science and science communication marked by subpoenas, hearings, lawsuits, and court cases.	**Secularization, fundamentalism, polarization** Context on the "culture wars": how science long ago became a cultural field for politics, especially in the United States. Also, historical

		context on the economies of information, misinformation, and disinformation.
13	**Anthropocene as scientific proposal** The science behind the proposal of the Anthropocene Working Group of the International Commission on Stratigraphy. What are the intellectual and political stakes?	**Anthropocene as contested idea** The "scene" with -cenes: many alternative names for the anthropogenic future; many ideological arguments about scientific nomenclature. What are the intellectual and political stakes?
14	**Doomism as narrative** How doom became the assumed end of climate history for many climate journalists and climate activists. What other outcomes are still possible in this fragile moment? How much time do we have, really? What lessons about can we take from past climates?	**Catastrophism as narrative** How religious apocalypse or secular collapse became conventional endings for stories about the human past, including stories told by scientists. What other narratives could (should?) be told? What lessons can we take from past peoples?
		Potential reading: Aaron Sachs, *Stay Cool: Why Dark Comedy Matters in the Fight Against Climate Change* (NYU Press, 2023)