

ENCE-MPS Braids

To illustrate the depth of expertise available to students in the MPS track, we describe three provisional Braids within the MPS track:

- Making Markets
- Sustainable Business
- Justice & Law

Harvard has considerable social-science expertise in its professional schools (e.g., Business, Law, HKS, Public Health) and we will draw on the strengths of social science faculty outside FAS. We welcome faculty from these programs who wish to teach an undergraduate-level course and will find entry-points for Harvard College students to these courses.

Braid 1: Making Markets

Markets – fields of buyers and sellers, signals of costs and prices, and materialities of products and technologies – do not make themselves. Making, remaking, and unmaking markets challenge climate solutions, because the institutional arrangements – the rules of the game – that enable current markets often constrain new technologies in ways that slow their adoption. Electricity markets vividly and urgently illustrate this. The electric grid – really a network of regional grids – relies on price-setting mechanisms that simply do not work as well for the kind of power that AI data centers demand, or the kind of power that lower-energy-density renewables such as solar and on-shore wind supply. Moreover, the supply of abundant renewable energy is often located very far from the demand for that energy, crossing the jurisdictional lines of existing markets. Students following the Making Markets plan of study will learn about the theory and practice of market design, and apply these lessons to live cases of market design for climate solutions.

The Making Markets Braid within the Markets, Politics, & Societies Track could consist of:

1. ENCE 10 (gateway course)
2. ENCE 100 (senior team-project course)
3. Math 1a
4. Quantitative Methods
5. Qualitative Methods or other applied methods course to expand the methodological toolkit
6. Environmental and climate economics (example: Econ 1661)
7. Politics of the environment and climate change (example: Gov 1722)
8. New course by Anna Russo on environmental regulation and market design (SS)
9. Energy, Env Econ, Policy (HKS API-165)
10. Technology, Environment, and Society (ESPP 77) or Economic Sociology (Sociology 1144)
11. ENCE 98 Junior Tutorial
12. ENCE-51 Introduction to Nature, Environment, and Human Imagination
13. ENCE 50 or **ES 145**: Modern Electric Power Systems

Courses that would fit the Making Markets plan of study include:

1. SOCIOL 114: Economic Sociology
2. PSY 1525: Psychology for a Sustainable Future
3. GOV 94CP: Political Economy of the Environment
4. AFRAMER 193Y/ANTHRO 2695: Landscape Fieldwork: People, Politics, Practices
5. SOCIOL 1173: Sociology of Development
6. WOMGEN 1495: Feminist Ecologies and Economies
7. HISTSCI 1385: Water: The Politics and Uncertain Futures of Drought and Climate Change
8. HISTSCI 1480: Food, Science, and the Invention of Global Hunger
9. ES 145: Modern Electric Power Systems
10. ES 215: Physical and Economical Operations of Sustainable Energy Systems.
11. EPS 109: Earth Resources and the Environment

Braid 2: Sustainable Business

Sustainable business means making money, meeting present and future human needs, and enabling long-run planetary health – all at the same time. This simultaneity requires the capacity to understand how business practices in the present carry long-run implications for the wellbeing of people and our planet. The Sustainable Business braid and plan of study within the Markets, Politics, and Societies track prepares students for the sustainable businesses of the future, by providing multiple perspectives on what business is, who and what business is and can be for, and how organizational change is possible. The new and fast-growing climate-tech field illustrates the urgent demand for graduates with this kind of training: business leaders in sustainability need to understand deeply the scientific and engineering principles of sustainable technologies and practices, the social and economic realities of implementing innovation, and the cultural foundations of representing and imagining future generations and future planetary conditions.

The Sustainable Business Braid within the Markets, Politics, & Societies Track could consist of:

1. ENCE 10 (gateway course)
2. ENCE 100 (senior team-project course)
3. Math 1a
4. Quantitative Methods
5. Qualitative Methods or other applied methods course to expand the methodological toolkit
6. Sociology of climate change (example: Soc 1284)
7. Environmental and climate economics (example: Econ 1661)
8. PSY 1525: Psychology for a Sustainable Future
9. Technology, Environment, and Society (ESPP 77) or Economic Sociology (Sociology 1144)
10. ENCE 98 Junior Tutorial
11. ENCE-51 or PHIL 1661: Indigenous Philosophies for the Technological Age

12. ENCE 50 or AP 236: Physical Electrochemistry and its Applications to Sustainable Engineering

Courses that would fit the Sustainable Business plan of study include:

1. WOMGEN 1495: Feminist Ecologies and Economies
2. SOC-STD 98WM: Infrastructure and Sociality
3. AFRAMER 130Y: Mobility, Power and Politics
AFRAMER 193Y/ANTHRO 2695: Landscape Fieldwork: People, Politics, Practices
4. GOV 94CP: Political Economy of the Environment
5. GOV 1013: GIS Analysis of Hazard Vulnerability
6. GOV 94DN: Mapping Social and Environmental Space
7. PSY 1525: Psychology for a Sustainable Future
PSY 1017: Nature Can Nurture: Fostering an Ecological Worldview
8. SOCIOL 1173: Sociology of Development
9. ANTHRO 1255: Human Diet: From Neanderthals to the Future of Food
10. AP 236: Physical Electrochemistry and its Applications to Sustainable Engineering.

Braid 3: Justice & Law

Energy, climate, and environmental problems and solutions all raise questions of fairness in outcomes and processes. Who wins, who loses, and who bears responsibility in a changing climate? Are justice and legal rights just for people, or can we expand the frame to nature and the environment? What about the rights and responsibilities of people long dead, or yet to be born? How does and should law change as the climate changes? How should we think about and how can we apply ideas of climate justice and environmental justice? More specifically, the current concept of a “just energy transition” illustrates why climate solutions demand a new generation with combined insight into the engineering and scientific fundamentals of energy, the human foundations of justice, and the political and social realities of law. Within the Markets, Politics, & Societies Track, students will have opportunities to develop the depth of expertise and breadth of perspective required to take their next steps toward creating and implementing climate solutions through ethical, legal, and moral practice.

The Justice & Law Braid within the Markets, Politics, & Societies Track could consist of:

1. ENCE 10 (gateway course)
2. ENCE 100 (senior team-project course)
3. Math 1a
4. Quantitative Methods
5. Qualitative Methods or other applied methods course to expand the methodological toolkit
6. Sociology of climate change (example: Soc 1284)
7. Politics of the environment and climate change (example: Gov 1772)
8. GENED 1015: Ethics of Climate Change or API 170: Managing Climate Change Risks: Information, Incentives, and Institutions

9. HIST 1936: The Rights of Nature or API 101: Resources, Incentives, and Choices I: Markets and Market Failures
10. GENED 1167: Climate Crossroads or SES 5409: Climate Justice
11. ENCE 98 Junior Tutorial
12. ENCE-51 or PHIL 18: Human Ethics: A Brief History
13. ENCE 50 or EPS 109: Earth Resources and the Environment

FAS courses that would fit the Justice & Law plan of study include:

1. AFRAMER 130Y: Mobility, Power and Politics
2. AFRAMER 193Y/ANTHRO 2695: Landscape Fieldwork: People, Politics, Practices
3. GOV 40: International Conflict and Cooperation
4. GOV 1247: Geopolitics of Energy
5. PSY 1521: Political Polarization and Misinformation
6. SOCIOL 1175: Sociology of Immigration
7. SOCIOL 1184: Climate Change, Power, and Global Inequality
8. SOC-STD 98WH: Climate Justice: The Politics of Decarbonization
9. EH 213/ESPP 180: Climate Change, Health, and Environmental Justice-Focusing on Solutions
10. ANTHRO 1924: Catastrophes across Cultures: The Anthropology of Disaster
11. WOMGEN 1292: Indigenous Feminisms: Environmental Justice and Resistance