

Science, Technology, Ethics and Policy (STEP) Minor Electives (Updated for Spring 2023)

Below are the approved electives for the STEP minor, broken down by concentration area. While we have categorized courses under specific concentrations, some courses are relevant to multiple concentrations. Please note that not all classes listed below are open to all students. Students should verify their ability to enroll in specific courses through Testudo and should seek instructor permission to enroll in courses if appropriate. Please also note that not all courses are offered during all semesters.

As a reminder, students should select 1 elective course at the 100 or 200 level and 2 elective courses at the 300 or 400 level in order to complete the requirements for this minor.

If you learn of a course that is not on this list but may be suitable as a STEP minor elective, the advisor and program director are happy to review the course. Please email stepminor@umd.edu with a request for a review of the course. The email should include the course description and syllabus. See the definition for a STEP elective below.

Definition of a STEP Elective: *A course that approaches science and technology issues from a humanities and/or social sciences perspective.*

<u>General Education Codes Key</u>	
NS	Distributive Studies - Natural Sciences
IS	Signature Courses - I-Series
HS	Distributive Studies - History and Social Sciences
UP	Diversity - Understanding Plural Societies
HU	Distributive Studies - Humanities
CC	Diversity - Cultural Competency
SP	Distributive Studies - Scholarship in Practice

Political and Policy implications: This concentration explores the contemporary societal implications of science and technology. These courses ask students to think about the role science and technology has played in creating local and global social and environmental crises and what science and technology can do to help solve them.

- AGNR 301/PLCY 301 Sustainability
- ANSC 227 Eating with Eyes Wide Open (NS, IS)
- ANSC 437 Animal Biotechnology
- ANTH 210 Intro to Medical Anthropology and Global Health (HS, UP)
- ANTH 266 Changing Climate, Changing Cultures (HS, CC, IS)
- ANTH 323 Plagues, Pathogens and Public Policy (HS, IS)
- ANTH 412 Hypermarginality and Urban Health
- ANTH 413 Health Disparities in the United States
- ANTH 415 Advanced Studies in Global Health
- ANTH 481 Environmental Ethnographies of Asia (SP)
- AOSC 123 Causes & Implications of Global Change (NS, IS)
- ARCH 271/RDEV 250 People, Planet, and Profit: Building Sustainable Places (SP)
- ARCH 289I Sustainability at College Park (NS or SP, IS)
- AREC 200 The Chesapeake Bay Ecosystem: Intersection of Science, Economics, and Policy (NS, SP, IS)
- AREC 240 Introduction to Economics and the Environment (HS)
- AREC 241 Environment, Economics, and Policy (HS, IS)
- AREC 345 Global Poverty and Economic Development (HS, UP)
- AREC 365 World Hunger, Population, and Food Supplies (UP)
- AREC 466 Transportation Engineering, Economics, and Policy
- ASTR 220 Collisions in Space: The Threat of Asteroid Impacts (NS, IS)
- BSCI 126 Pollinators in Crisis (NS, IS)
- CHEM 433 Atmospheric Chemistry and Climate
- CHSE 205 Disability: From Stigma and Sideshow to Mainstream and Main Street (HS, UP, IS)
- ECON 185 Energy: Crisis or Breakthrough? (HS, IS)
- ENEE 200 Technology & Consequences: Engineering, Ethics, and Humanity (HU, IS)
- ENSP 370 Principles of Environmental Justice: Theory and Practice
- FGSM 310 Political Engagement & Advocacy (*must be FGSM Fellow*)
- FGSM 320 Public Health Policy (*must be FGSM Fellow*)
- FGSM 330 Homeland & National Security Policy (*must be FGSM Fellow*)
- FGSM 340 Energy & Environmental Policy (*must be FGSM Fellow*)
- FGSM 355 International Security and Intelligence (*must be FGSM Fellow*)
- FGSM 370 Science Diplomacy (*must be FGSM Fellow*)
- FGSM 380 Responses to Global Challenges (*must be FGSM Fellow*)
- FGSM 390 Water Security & Global Health Challenges (*must be FGSM Fellow*)
- GEOG 331 Introduction to Human Dimensions of Global Change
- GEOG 430 Climate, Energy, and Policy
- GVPT 206 Appetite for Change: Politics and the Globalization of Food (HS, IS)
- GVPT 273 Introduction to Environmental Politics (SP)
- HIST 401 Science and Gender

- LARC 452 Green Infrastructure and Community Greening
- PHIL 201 Spooky Action at a Distance: Where Physics Meet Metaphysics (HU, IS)
- PHIL 202 Know Thyself: Wisdom through Cognitive Sciences (HU, IS)
- PHIL 220 Bioethics: Regulating Right and Wrong (HS OR SP)
- PHIL 261 Philosophy of the Environment (HU)
- PHIL 313 From the Stoa to Silicon Valley: Ancient and Modern Approaches to Stoic Philosophy
- PHYS 105 Physics for Decision-Makers: Global Energy Crisis (NS, IS)
- PLCY 203 Liberty and Justice for All: Ethics and Moral Issues in Public Policy
- PLCY 388C Special Topics in Public Policy; Fundamentals of Cybersecurity for Policy Makers
- PLCY 388V Special Topics in Public Policy: From Artificial Intelligence to Genetic Engineering, Policy Implications of Emerging Technologies
- PLCY 388W Special Topics in Public Policy; Global Action and Problem Solving
- PLCY 401 Contemporary Issues in Public Policy- Politics of Pandemic and Outbreak Response
- PLSC 125 Feeding Nine Billion by 2050: Food Security and Crop Protection (NS, IS)
- SOCY 302 Intersectionality and Illness
- SOCY 335 Sociology of Health and Illness (SP)
- SOCY 463 Sociology of Masculinity: How Much Has Masculinity Really Changed?
- URSP 372 Diversity and the City (UP)
- VMSC 436 Animal Health Policy and Communication

Science and technology development: This concentration focuses on cultural, legal, organizational, and institutional forces that have shaped science and technology. It asks students to think about what causes knowledge production and technical practices to change over time and how these changes can improve implementation going forward.

- ANTH 242 Fire, Farming and Climate Change: An Archaeology Take on the History of Human Impacts on our Planet (HS, IS)
- ANTH 453 Archaeology of the Modern City
- ARCH 170 Design Thinking and Architecture (HU)
- ARCH 271 People, Planet, and Profit: Building Sustainable Places (SP)
- ARCH 272 Sustainability at College Park
- AREC 210 The Food Chain: What Happens As Your Food Goes From Farm to Table (HS, IS)
- BMGT 289A Social Enterprise: Changing the World through Innovation and Transformative Action (SP, IS)
- BMGT 289B How Do Innovators Think? (SP, IS)
- BSCI 135 Amazing Green: Plants that Transformed the World (NL, IS)
- ENCE 215 Engineering for Sustainability

- ENES 475 Leadership in Times of Crisis: Pandemics, Disasters, and Humanitarian Crises
- ENGL 143 Visualizing Knowledge: From Data to Images (HU, IS)
- ENMA 150 Materials of Civilization (NS, IS)
- ENMA 289A Bigger, Faster, Better: The Quest for Absolute Technology (NS, IS)
- ENME 467 Engineering for Social Change
- FGSM 330 Homeland & National Security Policy (*must be FGSM Fellow*)
- FGSM 350 Critical Regions & International Relations (*must be FGSM Fellow*)
- FGSM 355 International Security and Intelligence (*must be FGSM Fellow*)
- FGSM 360 US Diplomacy & Policymaking (*must be FGSM Fellow*)
- FGSM 370 Science Diplomacy: Foreign Policy and Science, Technology, and Innovation (*must be FGSM Fellow*)
- FGSM 380 Responses to Global Challenges (*must be FGSM Fellow*)
- FGSM 390 Water Security & Global Health Challenges (*must be FGSM Fellow*)
- GEOG 140 Natural Disasters: Earthquakes, Floods, and Fires (NS, IS)
- HIST 204 History of Science (HS)
- HIST 205 Environmental History (HS or HU)
- HIST 206 Introduction to the History of Technology (HS)
- HIST 224 Modern Military History, 1494-1815 (HS)
- HIST 289Y Zombies, Fear, and Contagion: A Cultural History of Public Health, Medicine, and Technology (HS or HU, UP, IS)
- HIST 329W Special Topics in History; Climate, Science and Society
- HIST 329X Planes, Trains, and Automobiles: Mobility and Transportation in History
- HIST 405 Environmental History
- HIST 406 History of Technology
- HIST 407 Technology and Social Change in History
- KNES 289W The Cybernetic Human (NS, IS)
- LARC 263 History of Landscape Architecture (HU)
- PHIL 409X Advanced Studies in Contemporary Philosophy; Quantum Mechanics and Metaphysics
- PHYS 199M The Manhattan Project (HS or NS, IS)
- SOCY 435 Society, Biology, and Health
- URSP 250 The Sustainable City (SP, IS)

Information economy: This concentration focuses on how the information economy has shaped scientific and technological practices. Students are asked to think about society's evolving relationships with information as a driving force in the private and public sector.

- AMST 260 American Culture in the Information Age (HS, IS)
- ARTH 240 Humanists on the Move (HU or SP)
- ASTR 230 Science and Fiction of Planetary Systems (NS, IS)
- CPSP 349T Infrastructure and Society
- ENGL 255 Literature of Science and Technology (HU)

- ENGL 290 Introduction to Digital Studies (HU or SP)
- ENGL 293 Writing in a Wireless World (HU or SP)
- ENGL 294 Persuasion and Cleverness in Social Media (HU or SP)
- ENGL 376 The Speculative Imagination: Science Fiction on Page and Screen
- ENGL 378F Special Topics in English; Paranoia, Conspiracies, and Fake News
- ENGL 461 Qualitative Research Methods in English Studies
- FGSM 370 Science Diplomacy: Foreign Policy and Science, Technology, and Innovation
(must be FGSM Fellow)
- FGSM 355 International Security and Intelligence *(must be FGSM Fellow)*
- GEOG 170 Mapping our Digital World (NS)
- HLTH 264 Tweets & Likes: Digital Health & Social Media (HS, IS)
- HLTH 364 Social Media & Digital Tools for Community & Public Health
- HNUH 288X The Human Interface, from Anatomy to Avatar (HU)
- INST 152 “Fake-Checking”: Battling Misinformation and Disinformation in the Real World (SP)
- INST 154 Apollo at 50 (HS, IS)
- INST 155 Social Networking: Technology and Society (HS, IS)
- INST 201 Introduction to Information Science (HS)
- INST 204 Designing Fair Systems (HS, IS)
- INST 311 Information Organization
- INST 346 Technologies, Infrastructure and Architecture
- INST 352 Information User Needs and Assessment
- INST 362 User-Centered Design
- INST 364 Human-Centered Cybersecurity
- INST 366 Privacy, Security and Ethics for Big Data
- INST 402 Designing Patient-Centered Technologies
- INST 441 Information Ethics and Policy
- INST 466 Technology, Culture, and Society
- JOUR 175 Media Literacy (SP, UP)
- JOUR 282 Beyond Facebook: How Social Media are Transforming Society, Culture, Business and Politics (HU, IS)
- JOUR 289E Media Law and Ethics in the Digital Age – (HS, IS)
- JOUR 402 Journalism Law and Ethics
- JOUR 459P Special Topics in Journalism; Censorship and Disinformation in the 21st Century: The New Global War for Political Power
- JOUR 476 Researching Emerging Media in Journalism: Past, Present and Future (HS)
- KNES 222 Gambling in the New Millennium (HS, IS)
- PLCY 304 Evaluating Evidence: Finding Truth in Numbers
- PLCY 388C Special Topics in Public Policy; Cybersecurity Policy: Practical Hacking for Policy Makers
- SOCY 225 Women’s Jobs, Men’s Jobs: Difference? (HS, IS)
- WGSS 428O Topics in Women, Gender, and Sexuality Studies; Gender Identity, Sexual Orientation and the News Media